86E02F "E25h0260

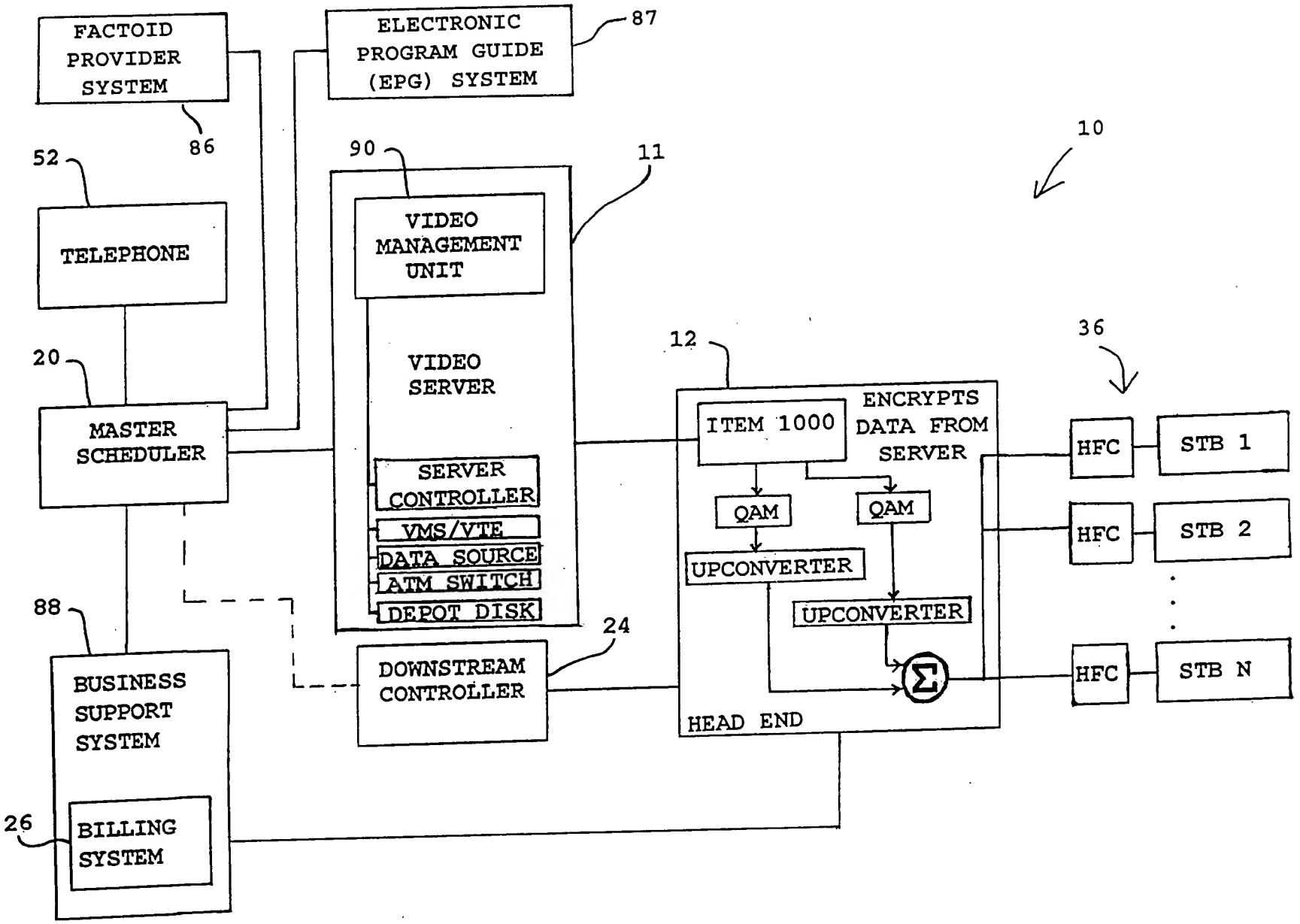



FIG. 1

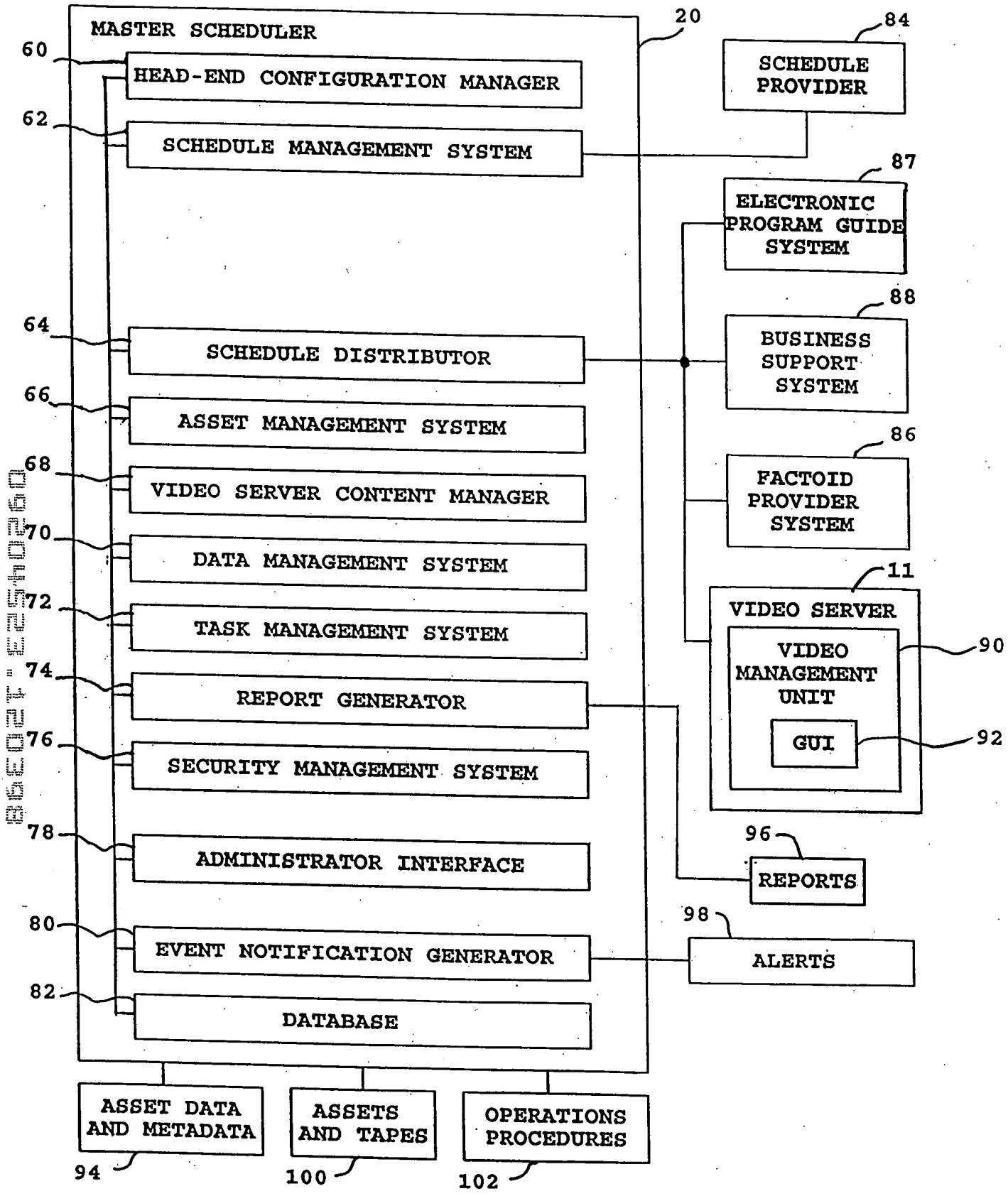

MASTER SCHEDULER
20
60
HEAD-END CONFIGURATION MANAGER
62
SCHEDULE MANAGEMENT SYSTEM
64
SCHEDULE DISTRIBUTOR
66
ASSET MANAGEMENT SYSTEM
68
VIDEO SERVER CONTENT MANAGER
70
DATA MANAGEMENT SYSTEM
72
TASK MANAGEMENT SYSTEM
74
REPORT GENERATOR
76
SECURITY MANAGEMENT SYSTEM
78
ADMINISTRATOR INTERFACE
80
EVENT NOTIFICATION GENERATOR
82
DATABASE
84
SCHEDULE PROVIDER
87
ELECTRONIC PROGRAM GUIDE SYSTEM
88
BUSINESS SUPPORT SYSTEM
86
FACTOID PROVIDER SYSTEM
11
VIDEO SERVER
VIDEO MANAGEMENT UNIT
90
GUI
92
96
REPORTS
98
ALERTS
ASSET DATA AND METADATA
94
ASSETS AND TAPES
100
OPERATIONS PROCEDURES
102

FIG. 2

B6E02T "E25H0260

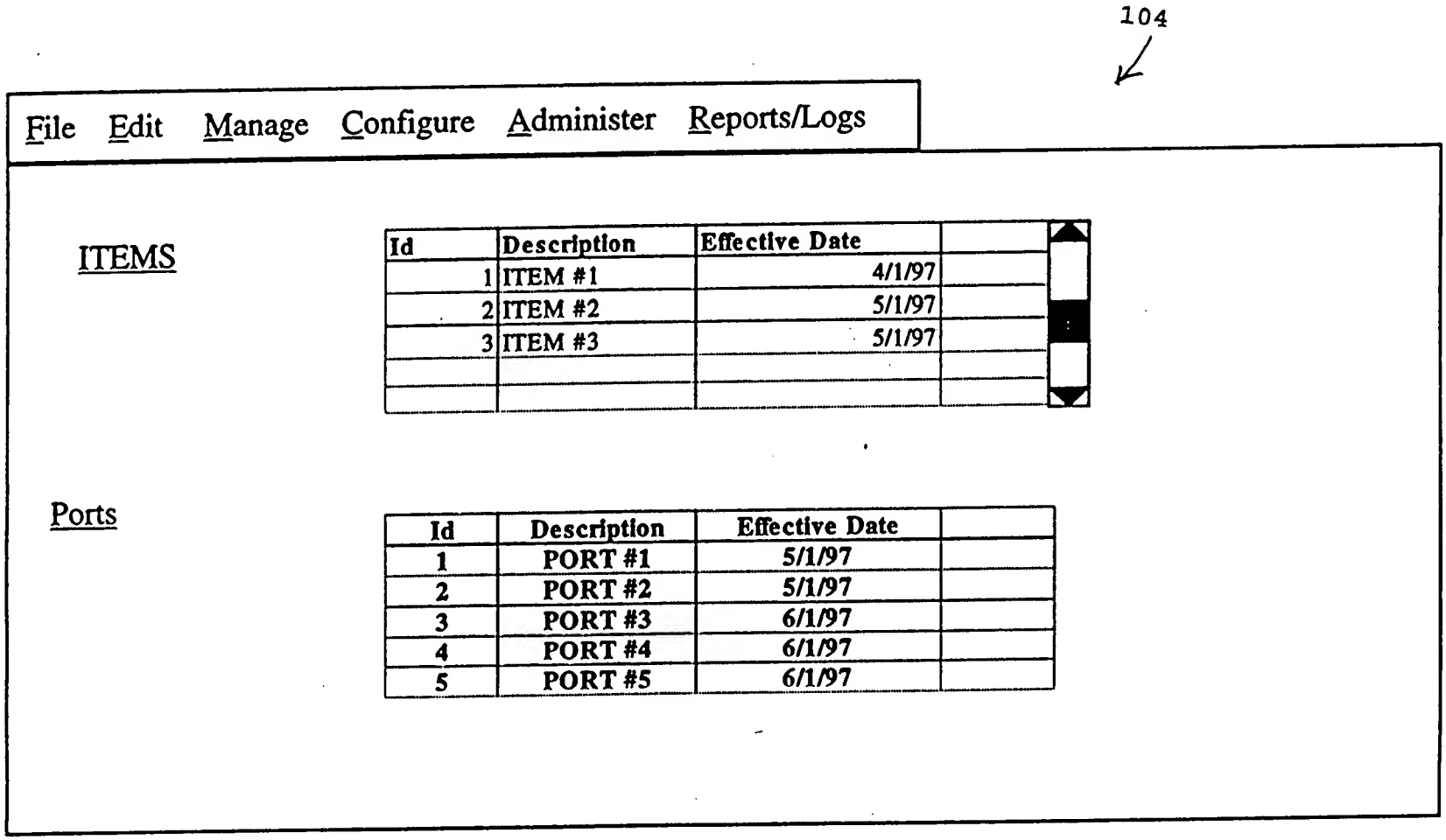



FIG. 3

86E02T" E25H0260

106

File Edit Manage Configure Administer Reports/Logs

| Lineup Name | Lineup Version | Status |
|---|---|---|
| Feb Lineup | 1 | Finalized |
| March Lineup | 4 | Being Distributed |
| April Lineup | 1 | WIP |
| | | |
| | | |

| Organization | Distributed (Y/N) | Distr. Date | Confirmed (Y/N) | Confirm Date | Remarks |
|---|---|---|---|---|---|
| EPG | Y | 2/4/97 | Y | 2/5/97 | Phone call from John |
| BSS | Y | 2/5/97 | N | | Sent a fax |
| | | | | | |
| | | | | | |
| | | | | | |

FIG. 4

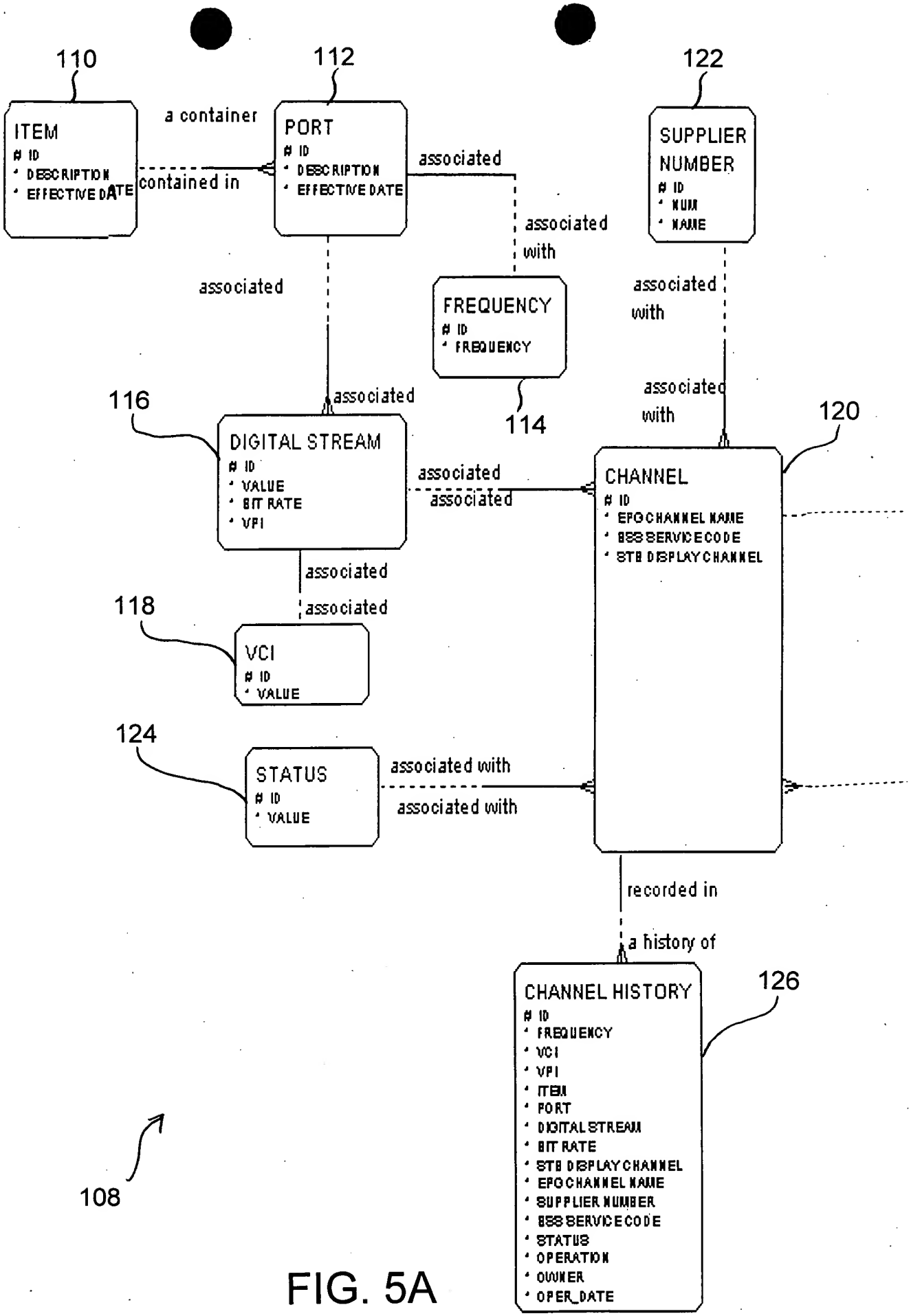



FIG. 5A

09204538 - 120306

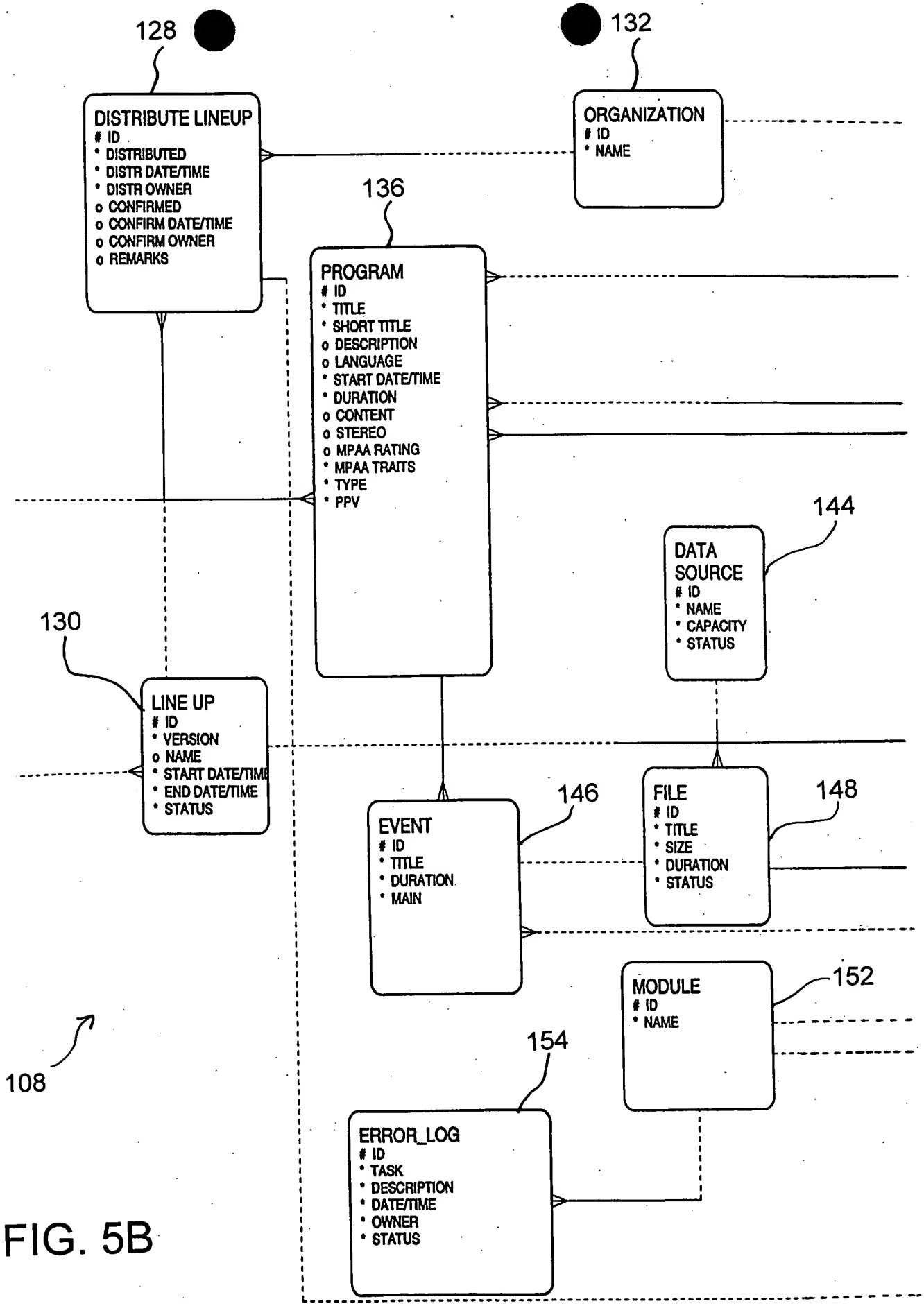

128
132
DISTRIBUTE LINEUP
# ID
* DISTRIBUTED
* DISTR DATE/TIME
* DISTR OWNER
o CONFIRMED
o CONFIRM DATE/TIME
o CONFIRM OWNER
o REMARKS
ORGANIZATION
# ID
* NAME
136
PROGRAM
# ID
* TITLE
* SHORT TITLE
o DESCRIPTION
o LANGUAGE
* START DATE/TIME
* DURATION
o CONTENT
o STEREO
o MPAA RATING
* MPAA TRAITS
* TYPE
* PPV
144
DATA SOURCE
# ID
* NAME
* CAPACITY
* STATUS
130
LINE UP
# ID
* VERSION
o NAME
* START DATE/TIME
* END DATE/TIME
* STATUS
146
EVENT
# ID
* TITLE
* DURATION
* MAIN
FILE
# ID
* TITLE
* SIZE
* DURATION
* STATUS
148
MODULE
# ID
* NAME
152
154
ERROR_LOG
# ID
* TASK
* DESCRIPTION
* DATE/TIME
* OWNER
* STATUS
108

FIG. 5B

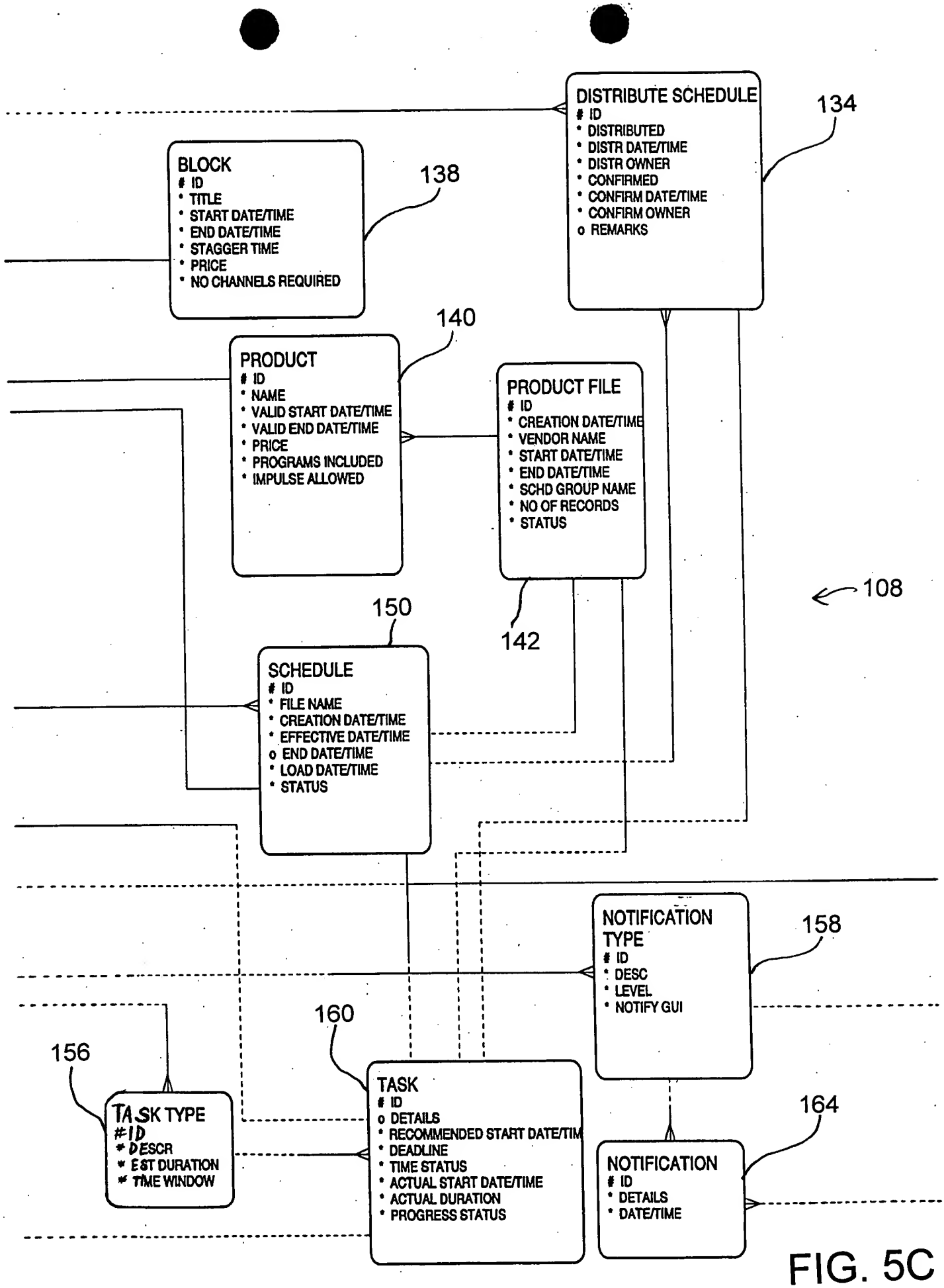

DISTRIBUTE SCHEDULE
# ID
* DISTRIBUTED
* DISTR DATE/TIME
* DISTR OWNER
* CONFIRMED
* CONFIRM DATE/TIME
* CONFIRM OWNER
o REMARKS
134
BLOCK
# ID
* TITLE
* START DATE/TIME
* END DATE/TIME
* STAGGER TIME
* PRICE
* NO CHANNELS REQUIRED
138
140
PRODUCT
# ID
* NAME
* VALID START DATE/TIME
* VALID END DATE/TIME
* PRICE
* PROGRAMS INCLUDED
* IMPULSE ALLOWED
PRODUCT FILE
# ID
* CREATION DATE/TIME
* VENDOR NAME
* START DATE/TIME
* END DATE/TIME
* SCHD GROUP NAME
* NO OF RECORDS
* STATUS
142
108
150
SCHEDULE
# ID
* FILE NAME
* CREATION DATE/TIME
* EFFECTIVE DATE/TIME
o END DATE/TIME
* LOAD DATE/TIME
* STATUS
NOTIFICATION TYPE
# ID
* DESC
* LEVEL
* NOTIFY GUI
158
160
156
TASK TYPE
#ID
* DESCR
* EST DURATION
* TIME WINDOW
TASK
# ID
o DETAILS
* RECOMMENDED START DATE/TIM
* DEADLINE
* TIME STATUS
* ACTUAL START DATE/TIME
* ACTUAL DURATION
* PROGRESS STATUS
164
NOTIFICATION
# ID
* DETAILS
* DATE/TIME

FIG. 5C

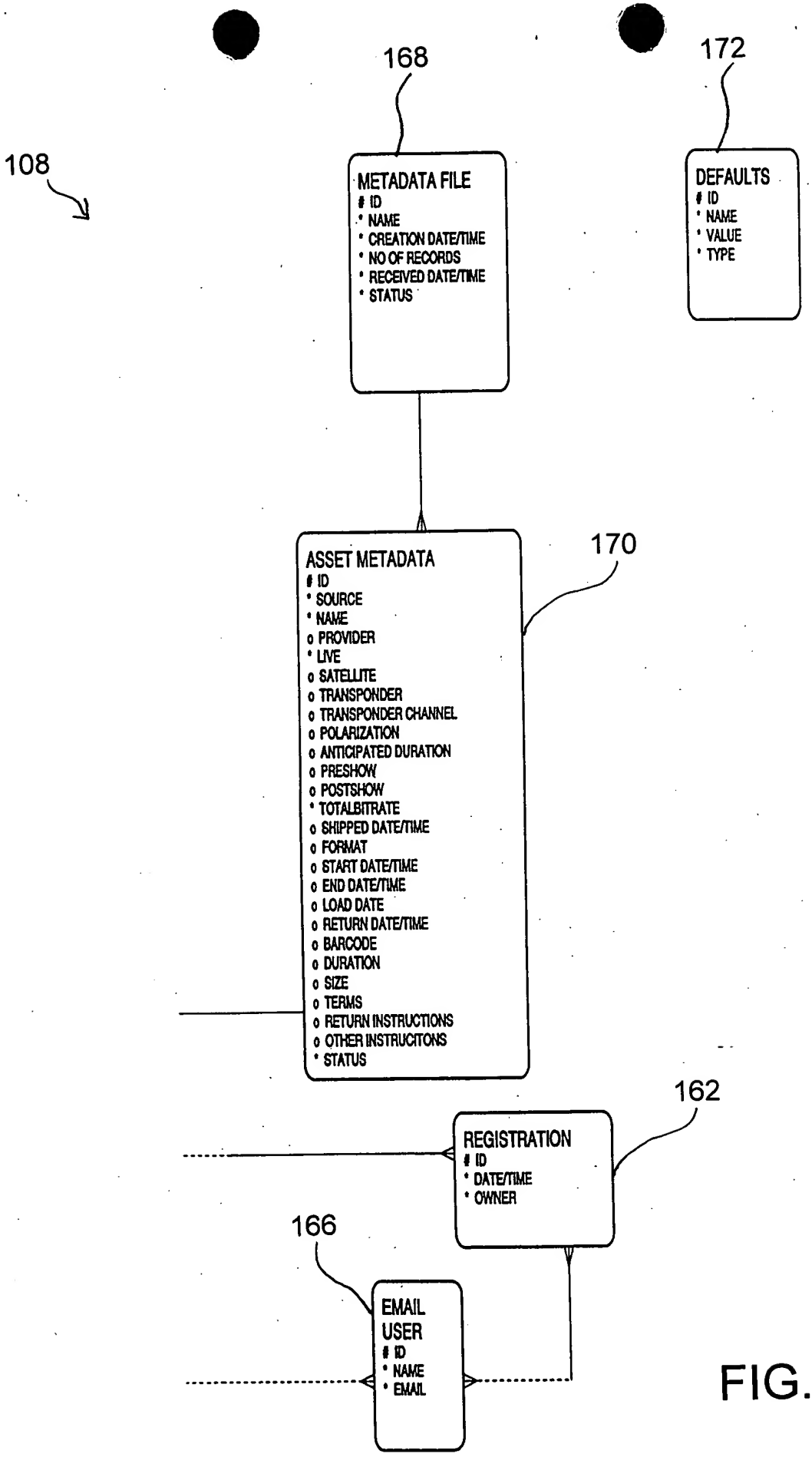



FIG. 5D

85025-4025-0 5250-4025-0

```
-- To ensure uniform size of data types, we use some
domains
-- Small Id        - number(4,0)
-- Small Char      - Varchar2(15)
-- Med Char        - Varchar2(100)
-- Date            - Date

CREATE TABLE items (
id                  number(4,0) primary key,
description         varchar2(100) not null,
effective_date      date not null
);

CREATE TABLE frequencies (
id                  number(4,0) primary key,
frequency           number(4,0) not null     -- in MHz
);

CREATE TABLE ports (
id                  number(4,0) primary key,
description         varchar2(100) not null,
effective_date      date not null,
freq_id  number(4,0) not null references frequencies,
item_id             number(4,0) not null references items
);

CREATE TABLE digital_streams (
id                  number(4,0) primary key,
value               number(4,0) not null,
bit_rate            archar2(15) not null,
vpi                 number(4,0) not null,
port_id             number(4,0) not null references ports,
vci_id              number(4,0) not null references vci
);

CREATE TABLE supplier_numbers (
id                  number(4,0) primary key,
value               number(4,0) not null,
name                varchar2(15) not null
);

CREATE TABLE vci (
id                  number(4,0) primary key,
value               number(4,0) not null
);

CREATE TABLE status (
id                  number(4,0) primary key,
value               varchar2(15) not null
);

CREATE TABLE channels(
id                  number(4,0) primary key,
epg_channel_name        varchar2(100) not null,
bss_service_code        number(6,0) not null,
stb_display_channel     number(4,0) not null,
dig_stream_id   number(4,0) not null references digital_streams,
sup_num_id      number(4,0) not null references supplier_numbers,
stat_id         number(4,0) not null references status
);

CREATE TABLE line_ups (
id                  number(4,0) primary key,
name                varchar2(15) not null,
version             varchar2(15) not null,
start_date_time date,
end_date_time   date,
stat_id         number(4,0) not null references status
);
```

FIG. 6

| Analog Frequency | VCI (33→1024) | VPI (fixed) | ITEM # | ITEM Port | Digital stream | Bit Rate | STB LED channel display | EPG channel name | ITC PAL file name | Supplier number | Relative channel number | BSS Service Code | Service Handle (code +32K) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 666 MHz | 33 | 0 | 1 | 1 | 1 | 4.5Mbps | 201 | A101 | V026mmyy | 026 | 1 | 801 | 33569 |
| 666 MHz | 34 | 0 | 1 | 1 | 2 | 4.5Mbps | 202 | A102 | V026mmyy | 026 | 2 | 802 | 33570 |
| 666 MHz | 35 | 0 | 1 | 1 | 3 | 4.5Mbps | 203 | A103 | V026mmyy | 026 | 3 | 803 | 33571 |
| 666 MHz | 36 | 0 | 1 | 1 | 4 | 4.5Mbps | 204 | A104 | V026mmyy | 026 | 4 | 804 | 33572 |
| 666 MHz | 37 | 0 | 1 | 1 | 5 | 4.5Mbps | 205 | A105 | V026mmyy | 026 | 5 | 805 | 33573 |
| 672 MHz | 38 | 0 | 1 | 2 | 1 | 4.5Mbps | 206 | A106 | V027mmyy | 027 | 1 | 806 | 33574 |
| 672 MHz | 39 | 0 | 1 | 2 | 2 | 4.5Mbps | 207 | A107 | V027mmyy | 027 | 2 | 807 | 33575 |
| 672 MHz | 40 | 0 | 1 | 2 | 3 | 4.5Mbps | 208 | A108 | V027mmyy | 027 | 3 | 808 | 33576 |
| 672 MHz | 41 | 0 | 1 | 2 | 4 | 4.5Mbps | 209 | A109 | V027mmyy | 027 | 4 | 809 | 33577 |
| 672 MHz | 42 | 0 | 1 | 2 | 5 | 4.5Mbps | 210 | A110 | V027mmyy | 027 | 5 | 810 | 33578 |
| 678 MHz | 43 | 0 | 1 | 3 | 1 | 4.5Mbps | 211 | A111 | V028mmyy | 028 | 1 | 811 | 33579 |
| 678 MHz | 44 | 0 | 1 | 3 | 2 | 4.5Mbps | 212 | A112 | V028mmyy | 028 | 2 | 812 | 33580 |
| 678 MHz | 45 | 0 | 1 | 3 | 3 | 4.5Mbps | 213 | A113 | V028mmyy | 028 | 3 | 813 | 33581 |
| 678 MHz | 46 | 0 | 1 | 3 | 4 | 4.5Mbps | 214 | A114 | V028mmyy | 028 | 4 | 814 | 33582 |
| 678 MHz | 47 | 0 | 1 | 3 | 5 | 4.5Mbps | 215 | A115 | V028mmyy | 028 | 5 | 815 | 33583 |
| 684 MHz | 48 | 0 | 1 | 4 | 1 | 4.5Mbps | 216 | A116 | V029mmyy | 029 | 1 | 816 | 33584 |
| 684 MHz | 49 | 0 | 1 | 4 | 2 | 4.5Mbps | 217 | A117 | V029mmyy | 029 | 2 | 817 | 33585 |
| 684 MHz | 50 | 0 | 1 | 4 | 3 | 4.5Mbps | 218 | A118 | V029mmyy | 029 | 3 | 818 | 33586 |
| 684 MHz | 51 | 0 | 1 | 4 | 4 | 4.5Mbps | 219 | A119 | V029mmyy | 029 | 4 | 819 | 33587 |
| 684 MHz | 52 | 0 | 1 | 4 | 5 | 4.5Mbps | 220 | A120 | V029mmyy | 029 | 5 | 820 | 33588 |
| 690 MHz | 53 | 0 | 1 | 5 | 1 | 4.5Mbps | 221 | A121 | V030mmyy | 030 | 1 | 821 | 33589 |
| 690 MHz | 54 | 0 | 1 | 5 | 2 | 4.5Mbps | 222 | A122 | V030mmyy | 030 | 2 | 822 | 33590 |
| 690 MHz | 55 | 0 | 1 | 5 | 3 | 4.5Mbps | 223 | A123 | V030mmyy | 030 | 3 | 823 | 33591 |
| 690 MHz | 56 | 0 | 1 | 5 | 4 | 4.5Mbps | 224 | A124 | V030mmyy | 030 | 4 | 824 | 33592 |
| 690 MHz | 57 | 0 | 1 | 5 | 5 | 4.5Mbps | 225 | A125 | V030mmyy | 030 | 5 | 825 | 33593 |

FIG. 7

| HEADER Record |
| --- |
| SERVICE (Channel) Record |
| PROGRAM Record |
| EVENT Record |
| EVENT Record |
| EVENT Record |
| SERVICE (Channel) Record |
| PROGRAM Record |

FIG. 8

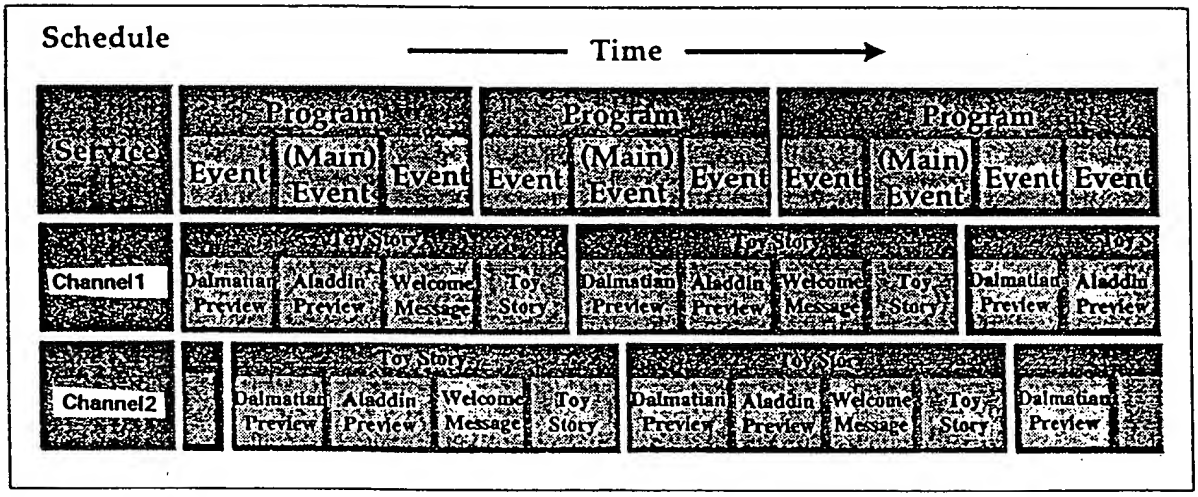



FIG. 9

86E02T" E25h0260

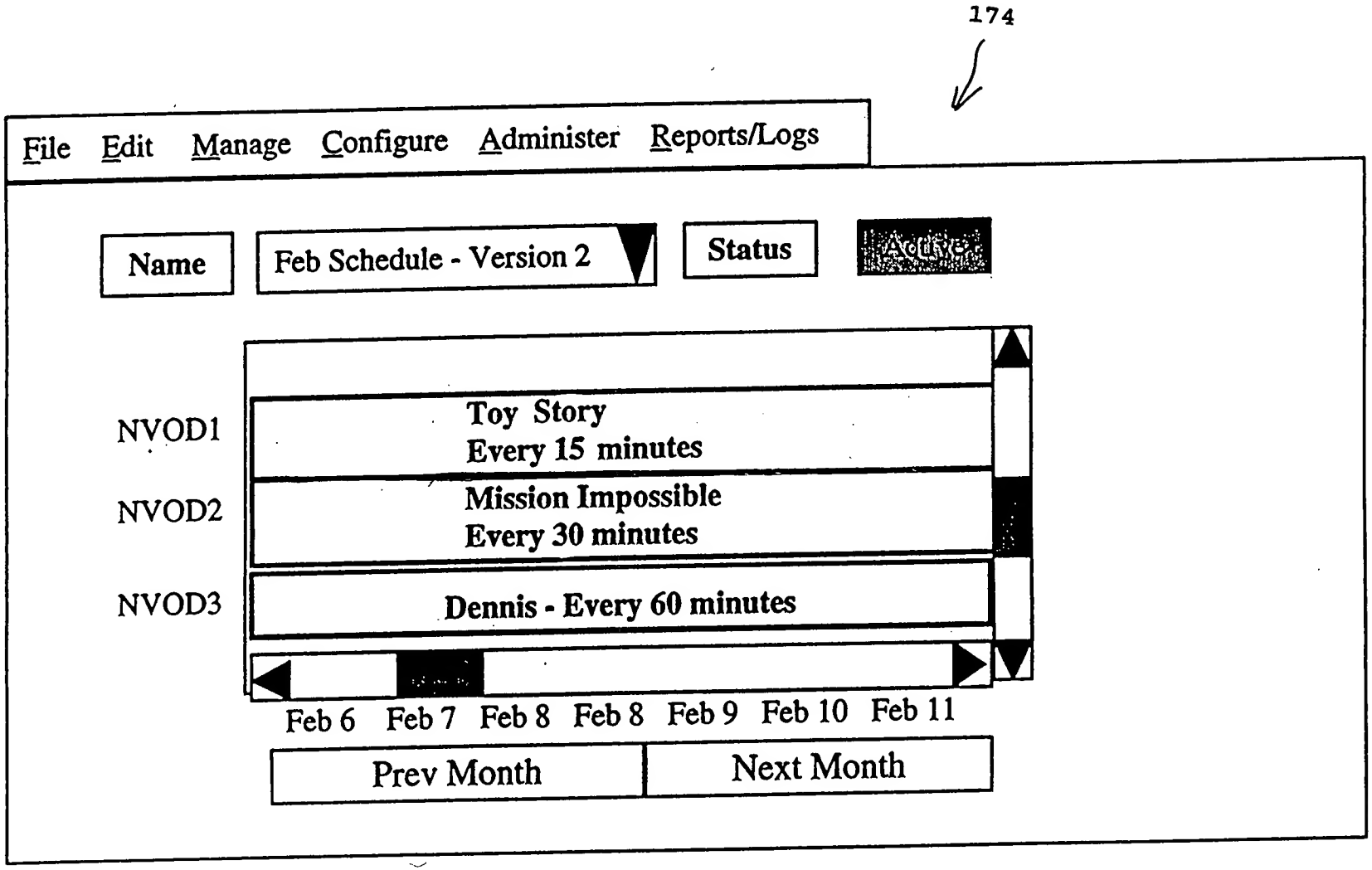



FIG. 10

86E027 "E25h0260

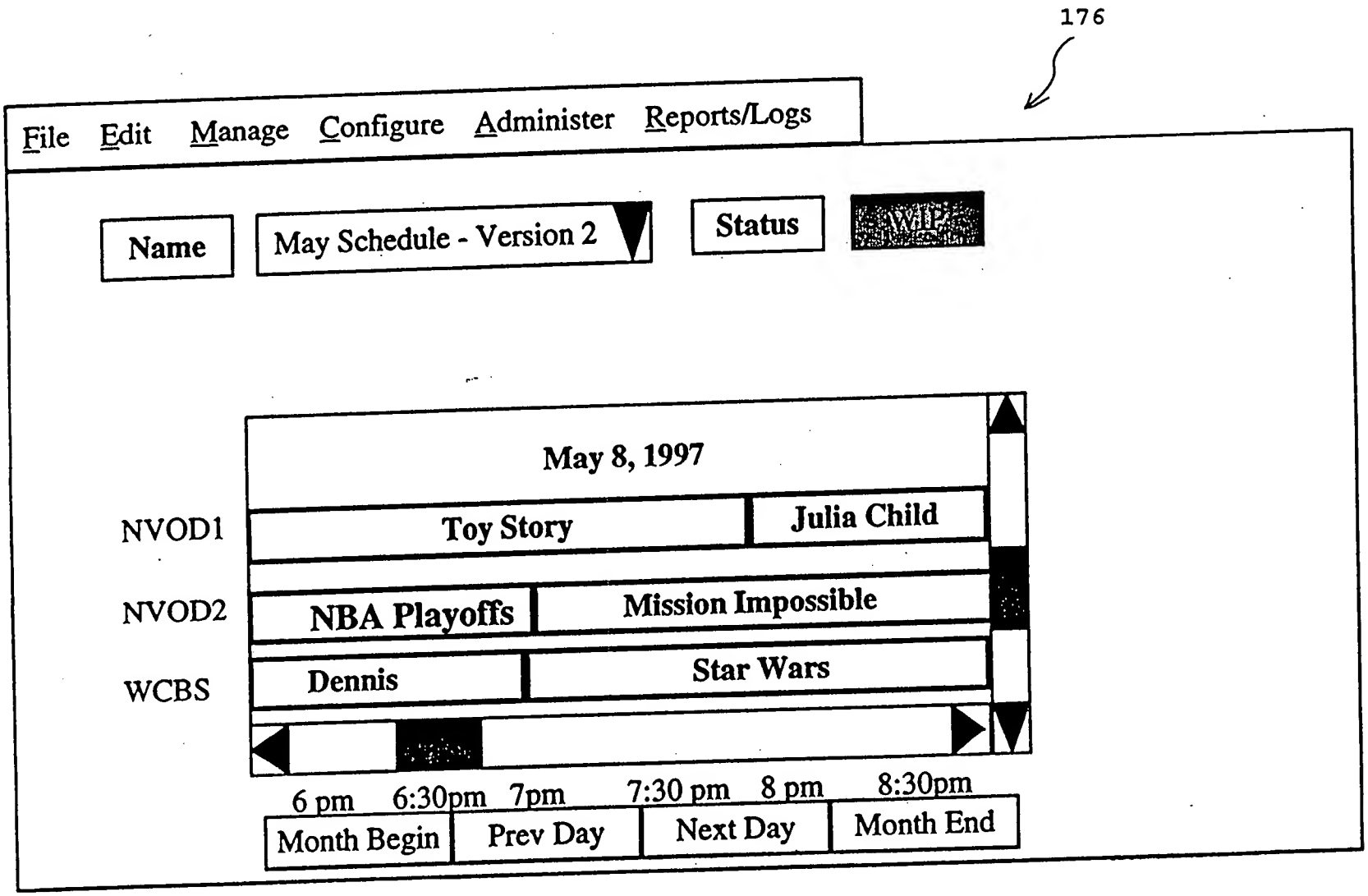



FIG. 11

86602T "25h0260

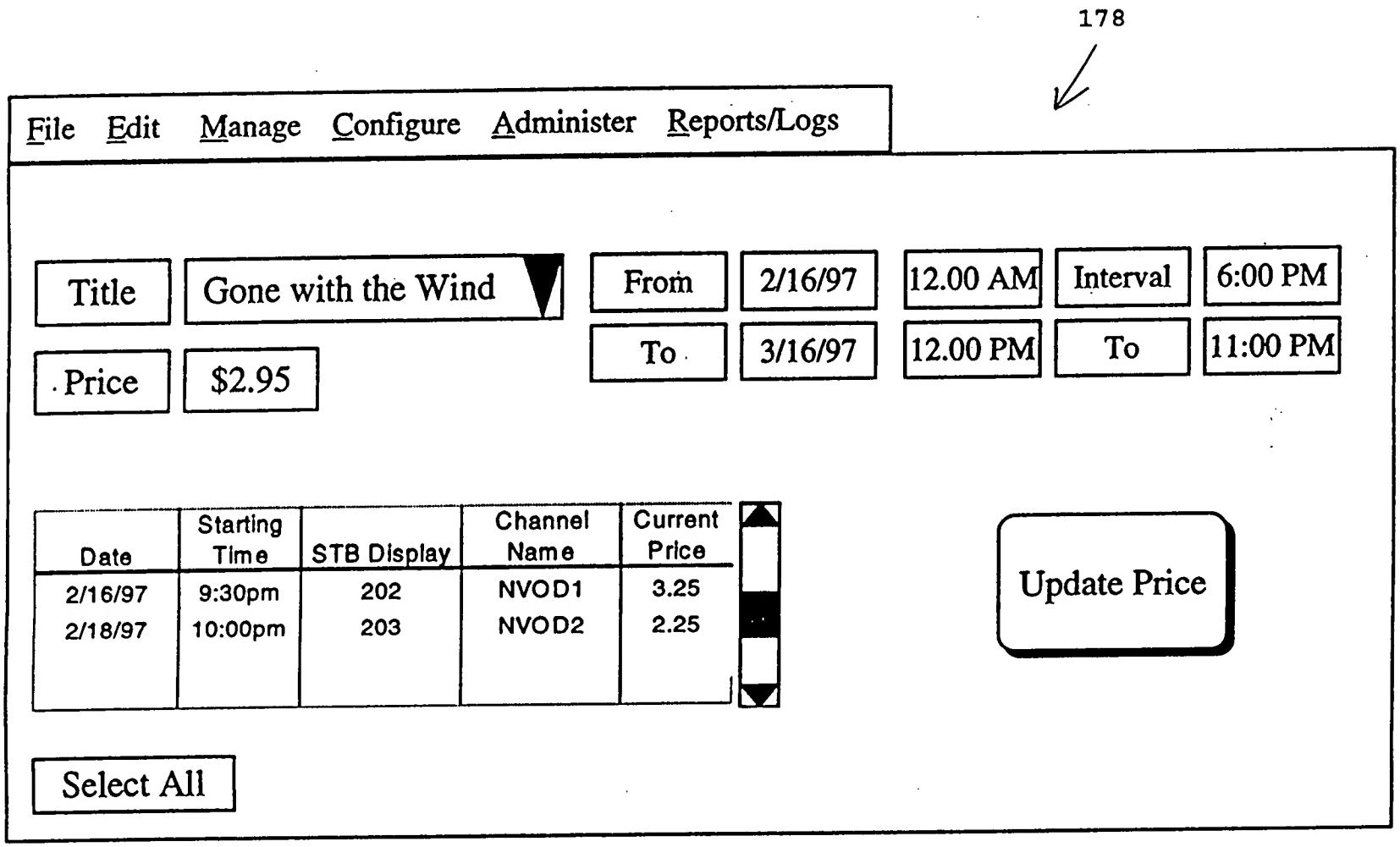



FIG. 12

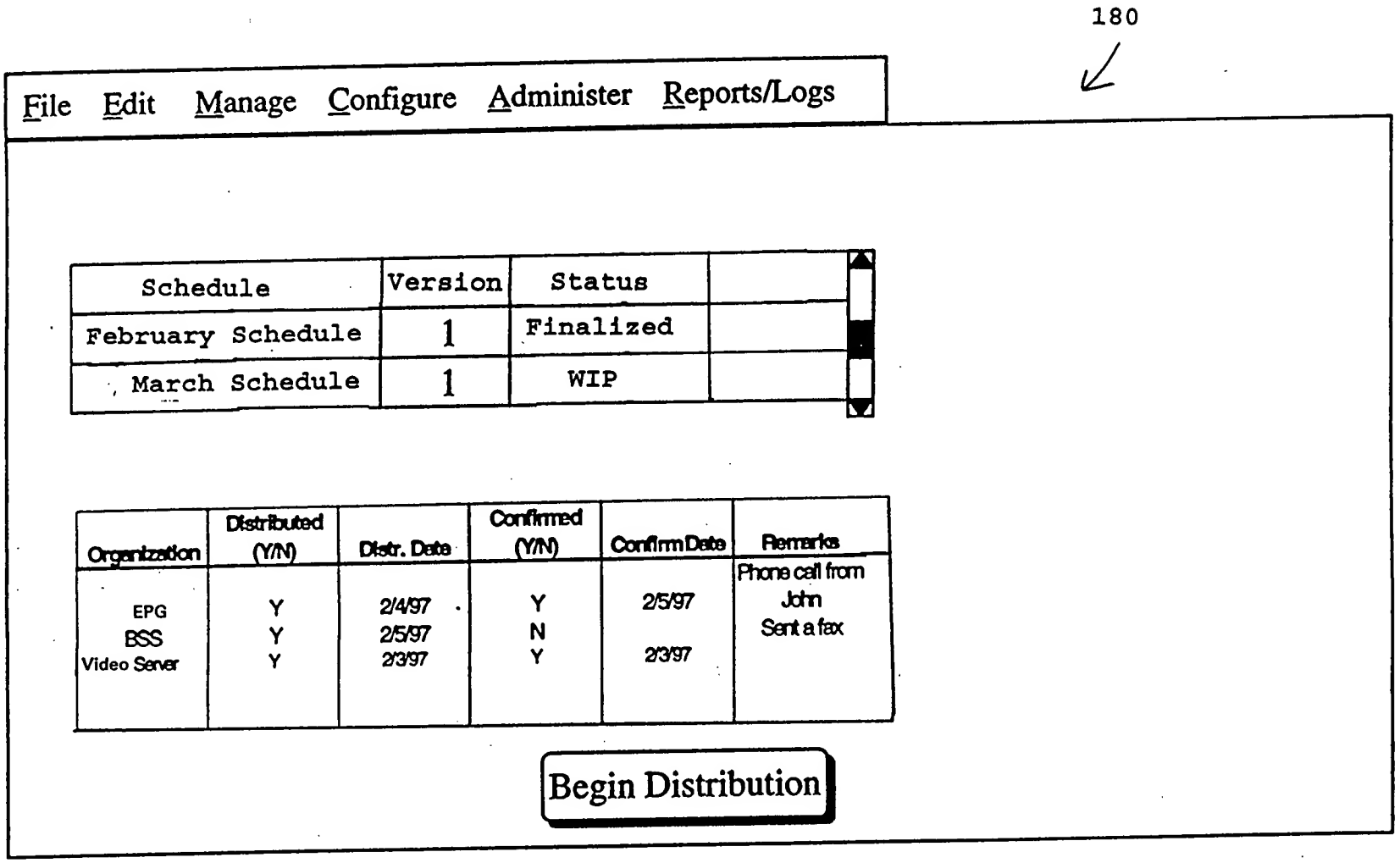

180
File Edit Manage Configure Administer Reports/Logs
Schedule | Version | Status
February Schedule | 1 | Finalized
March Schedule | 1 | WIP
Organization | Distributed (Y/N) | Distr. Date | Confirmed (Y/N) | Confirm Date | Remarks
EPG | Y | 2/4/97 | Y | 2/5/97 | Phone call from John
BSS | Y | 2/5/97 | N | | Sent a fax
Video Server | Y | 2/3/97 | Y | 2/3/97 |
Begin Distribution

FIG. 13

B6E02T" E25h0260

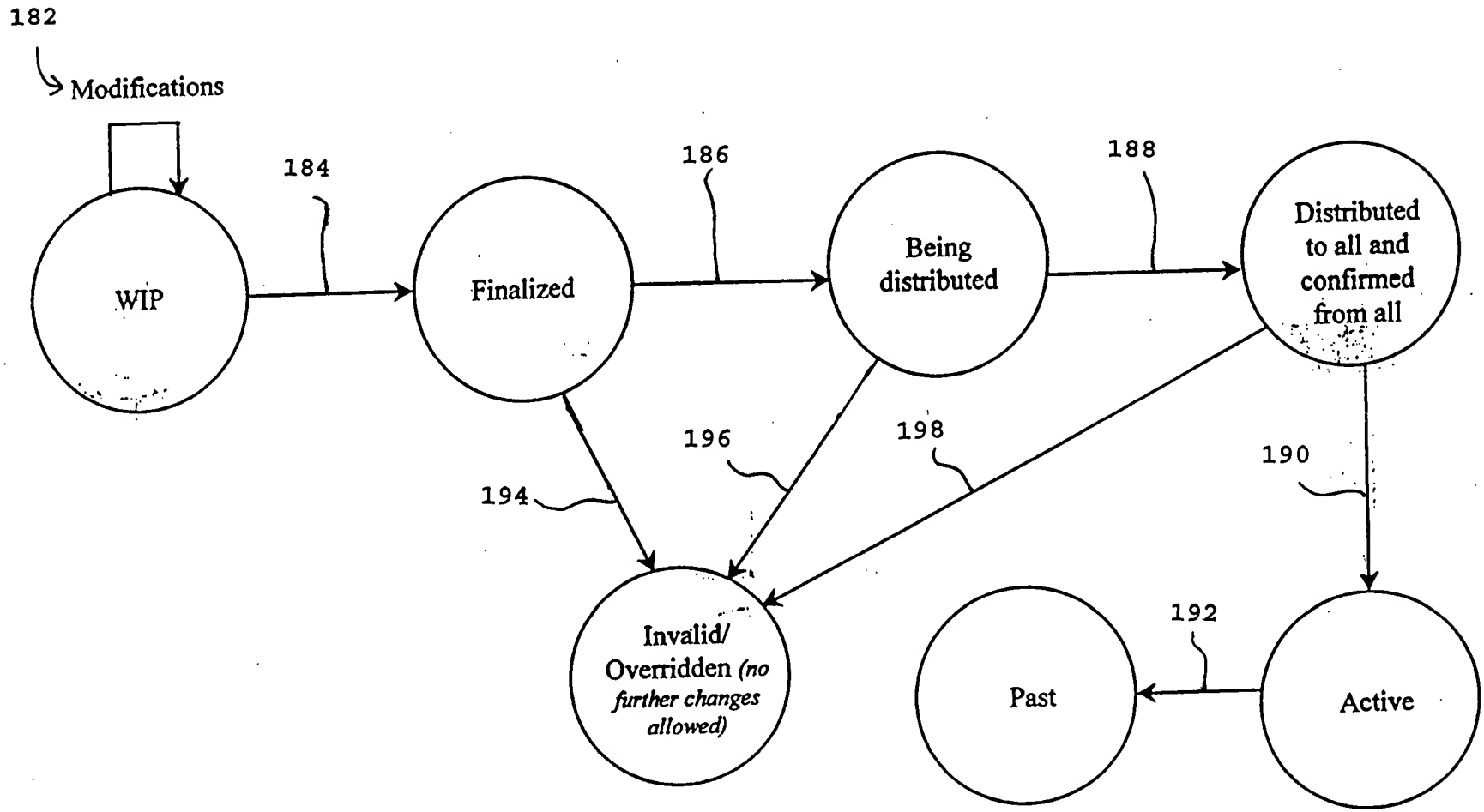



FIG. 14

86E027 " E25h0260

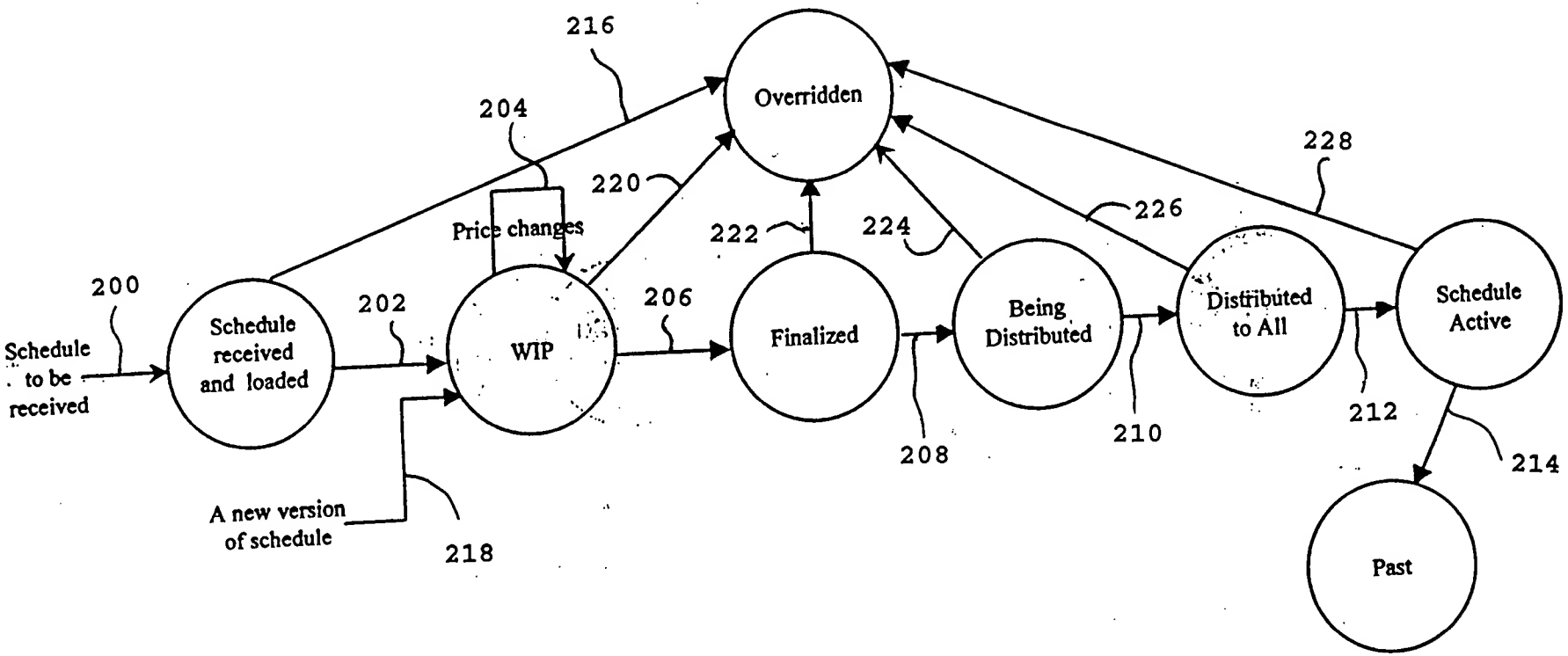



FIG. 15

09650742.052504

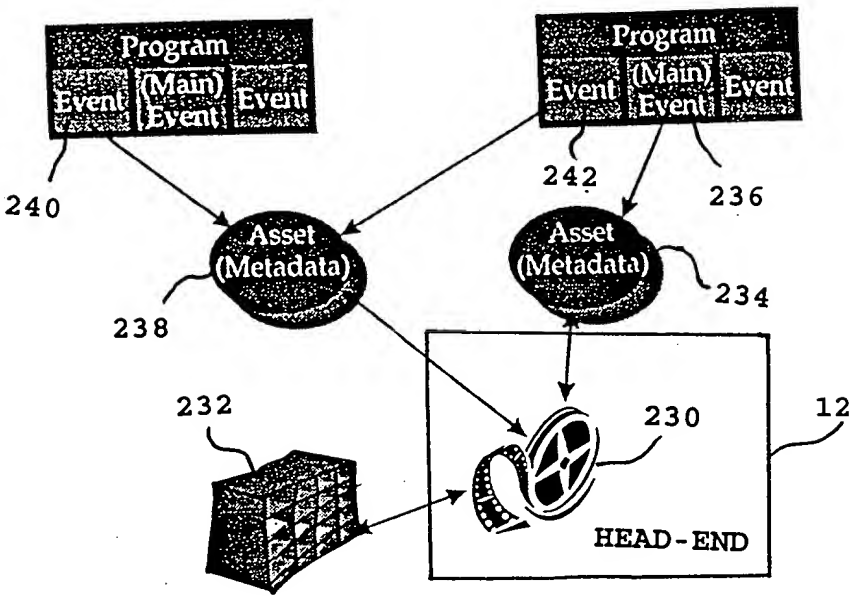



FIG. 16

| HEADER Record |
|---|
| ASSET METADATA Record |
| ASSET EVENT Record |
| ASSET EVENT Record |
| ASSET EVENT Record |
| ASSET METADATA Record |
| ASSET EVENT Record |

FIG. 17

86E02T" E25h0260

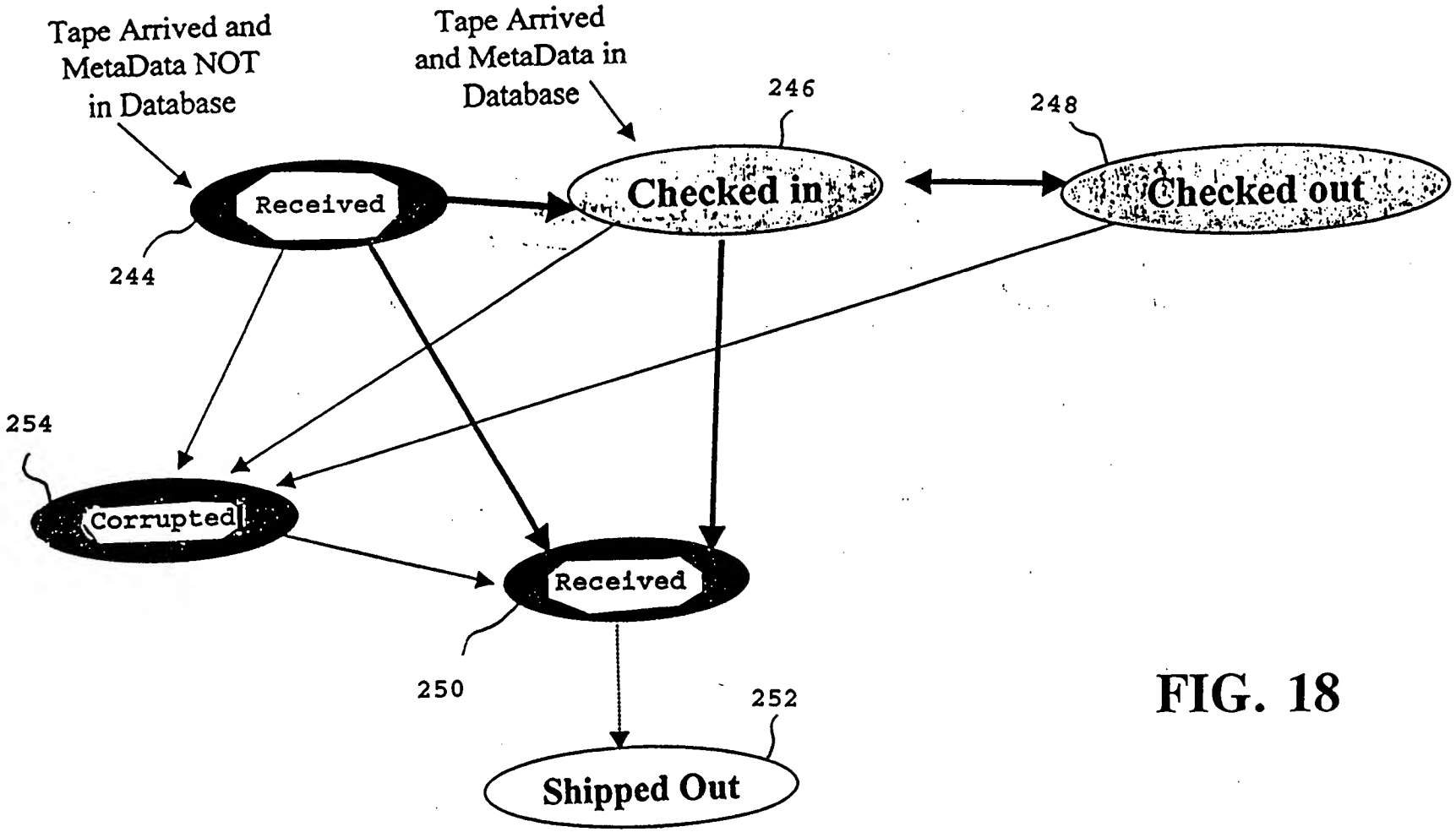



FIG. 18

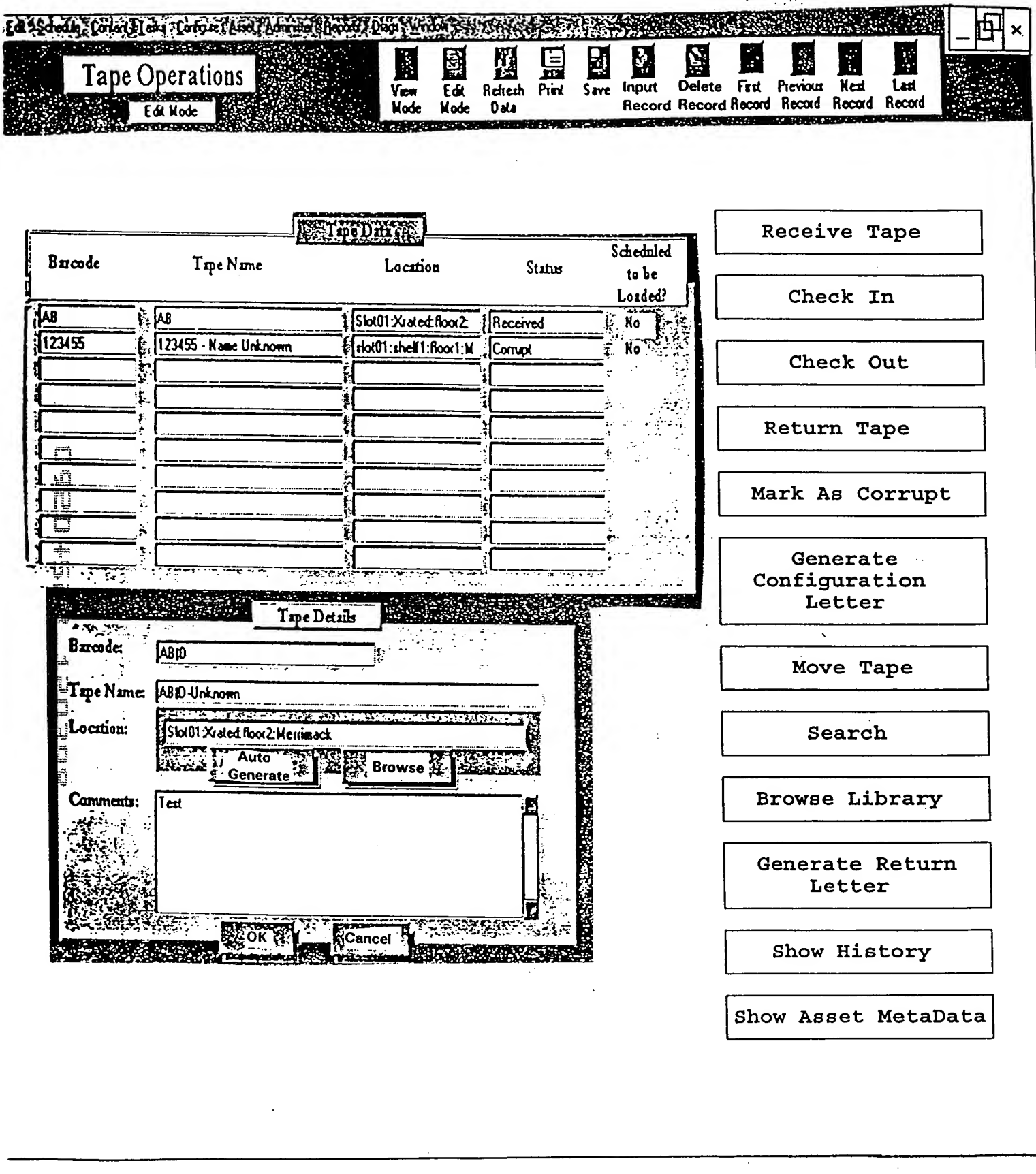

Tape Operations
Edit Mode
View Mode
Edit Mode
Refresh Data
Print
Save
Input Record
Delete Record
First Record
Previous Record
Next Record
Last Record
Tape Data
Barcode
Tape Name
Location
Status
Scheduled to be Loaded?
AB
AB
Slot01:X-rated:floor2:
Received
No
123455
123455 - Name Unknown
slot01:shelf1:floor1:M
Corrupt
No
Tape Details
Barcode:
ABf0
Tape Name:
ABf0-Unknown
Location:
Slot01:X-rated:floor2:Merrimack
Auto Generate
Browse
Comments:
Test
OK
Cancel
Receive Tape
Check In
Check Out
Return Tape
Mark As Corrupt
Generate Configuration Letter
Move Tape
Search
Browse Library
Generate Return Letter
Show History
Show Asset MetaData

FIG. 19

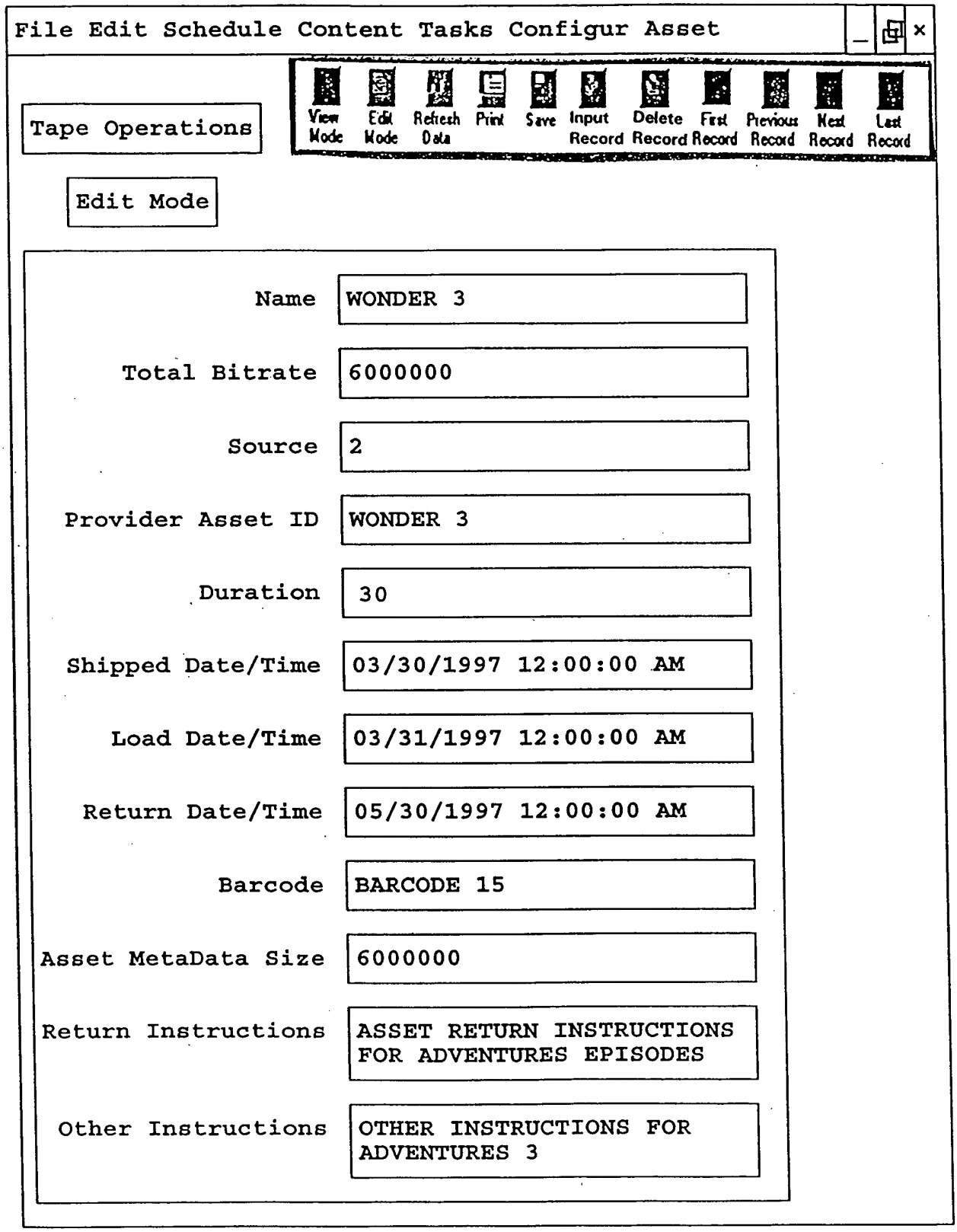

File Edit Schedule Content Tasks Configur Asset
View Mode
Edit Mode
Refresh Data
Print
Save
Input Record
Delete Record
First Record
Previous Record
Next Record
Last Record
Tape Operations
Edit Mode
Name
WONDER 3
Total Bitrate
6000000
Source
2
Provider Asset ID
WONDER 3
Duration
30
Shipped Date/Time
03/30/1997 12:00:00 AM
Load Date/Time
03/31/1997 12:00:00 AM
Return Date/Time
05/30/1997 12:00:00 AM
Barcode
BARCODE 15
Asset MetaData Size
6000000
Return Instructions
ASSET RETURN INSTRUCTIONS FOR ADVENTURES EPISODES
Other Instructions
OTHER INSTRUCTIONS FOR ADVENTURES 3

FIG. 20

86E027 E25H0260

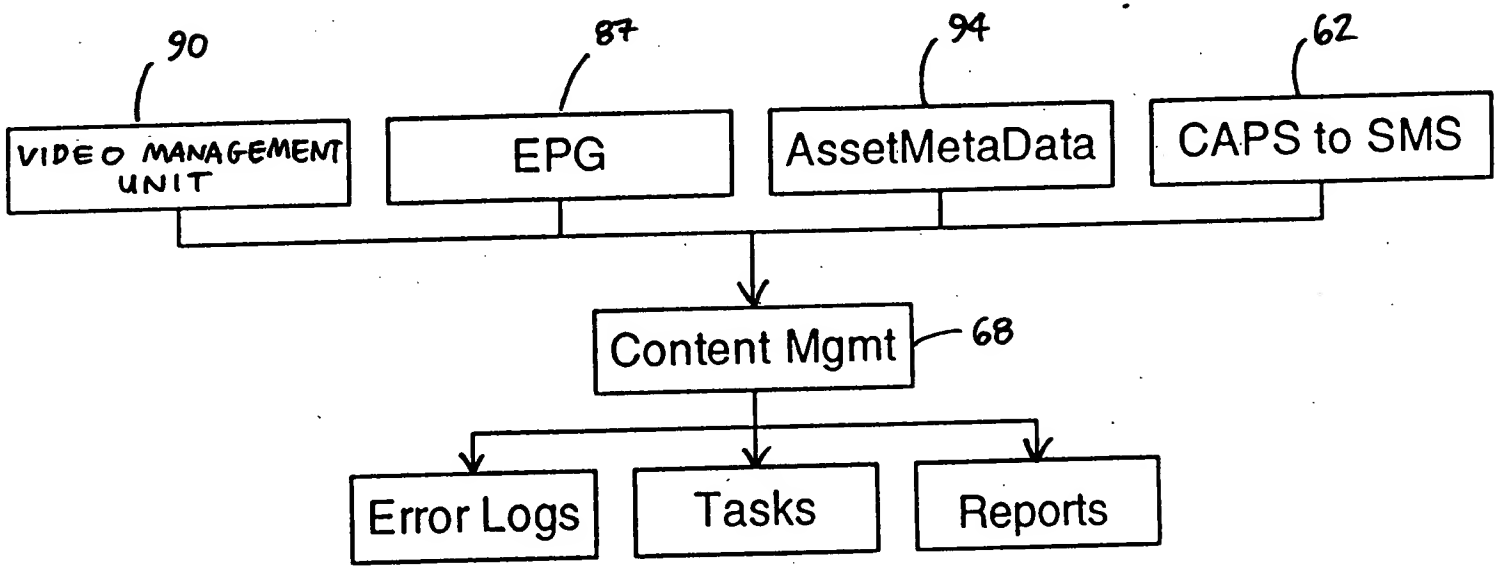



FIG. 21

86E027 "25h0260

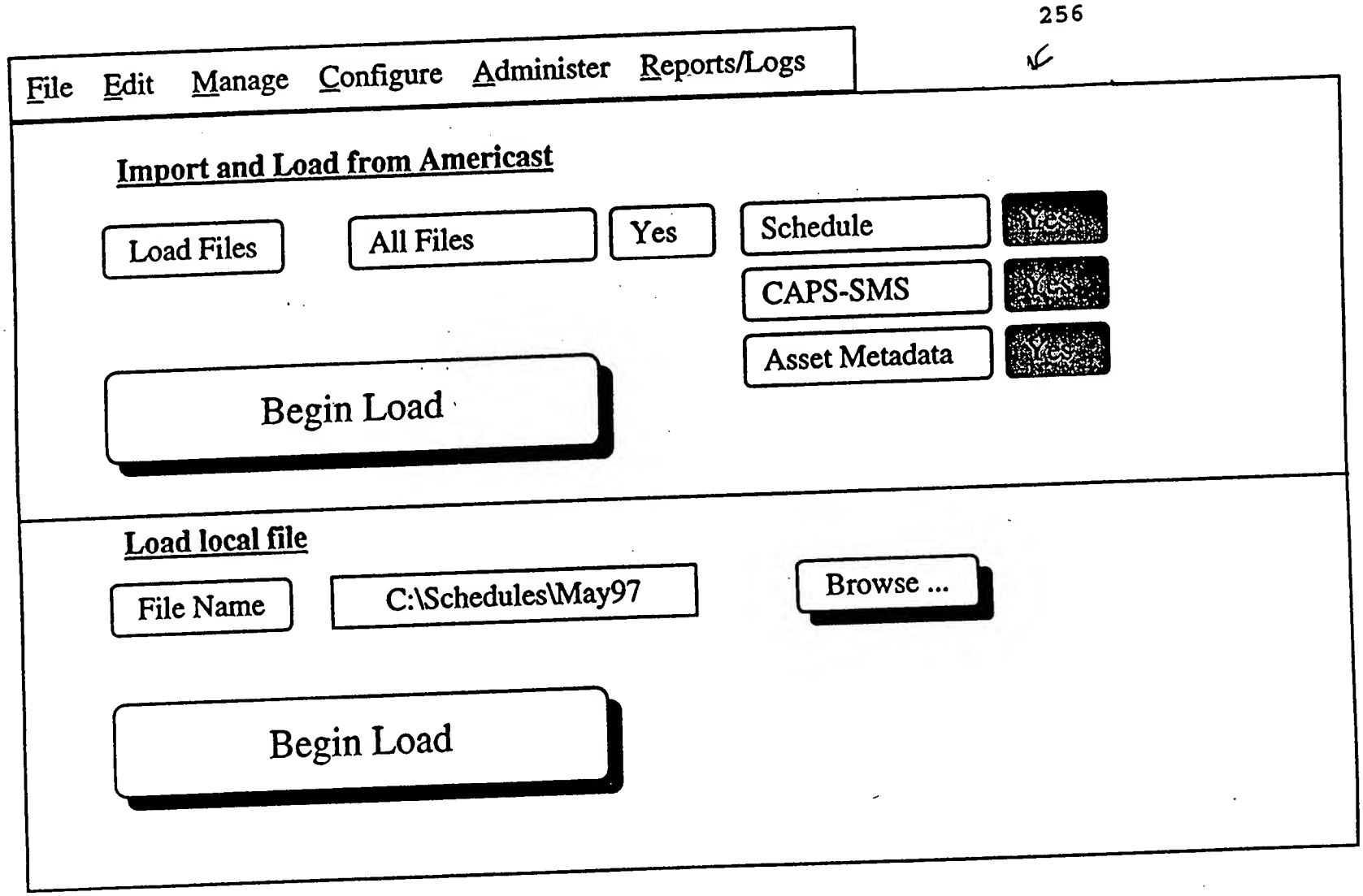



FIG. 22

86E02T "25hO26O

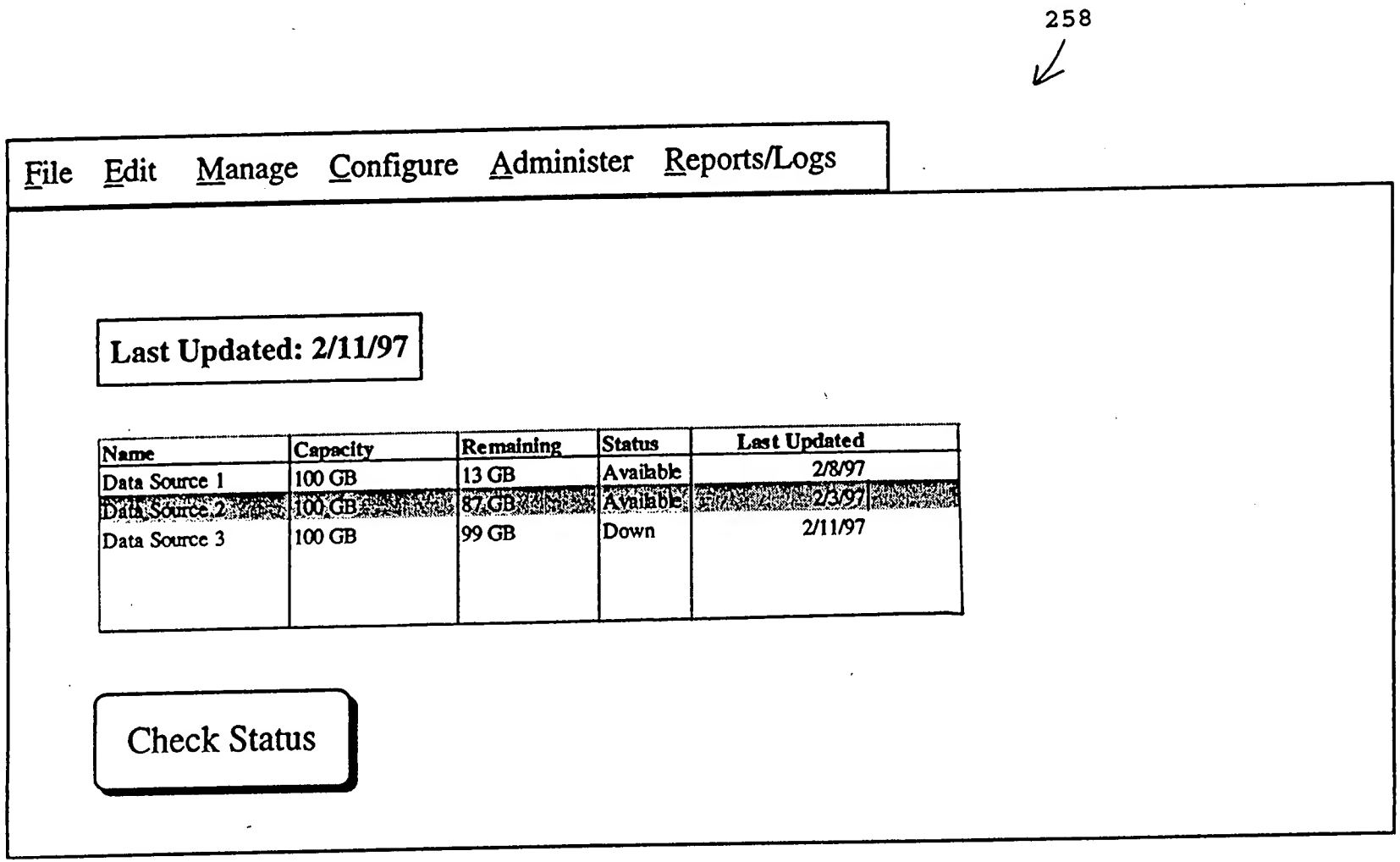



FIG. 23

86E02T" E25h0260

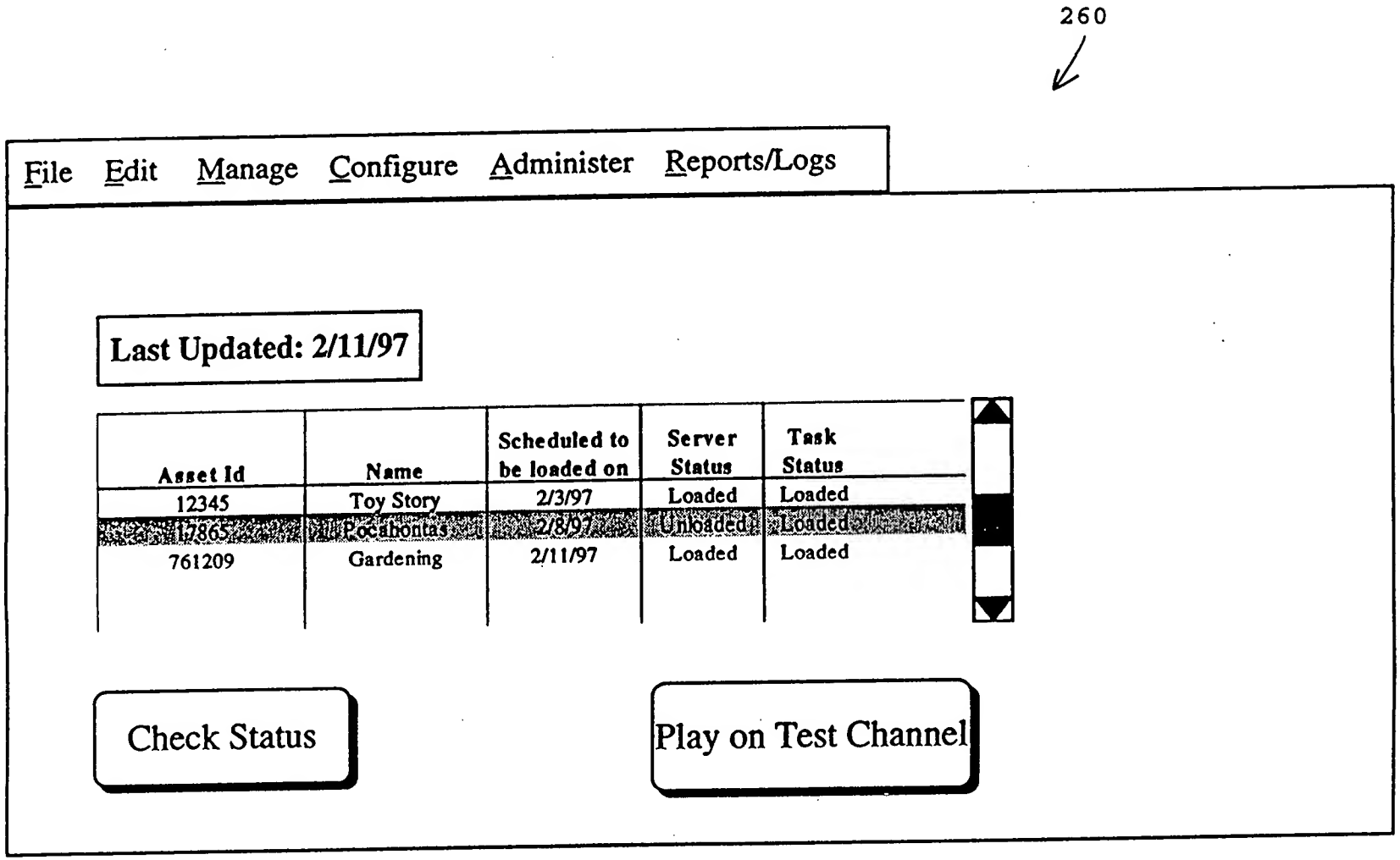



FIG. 24

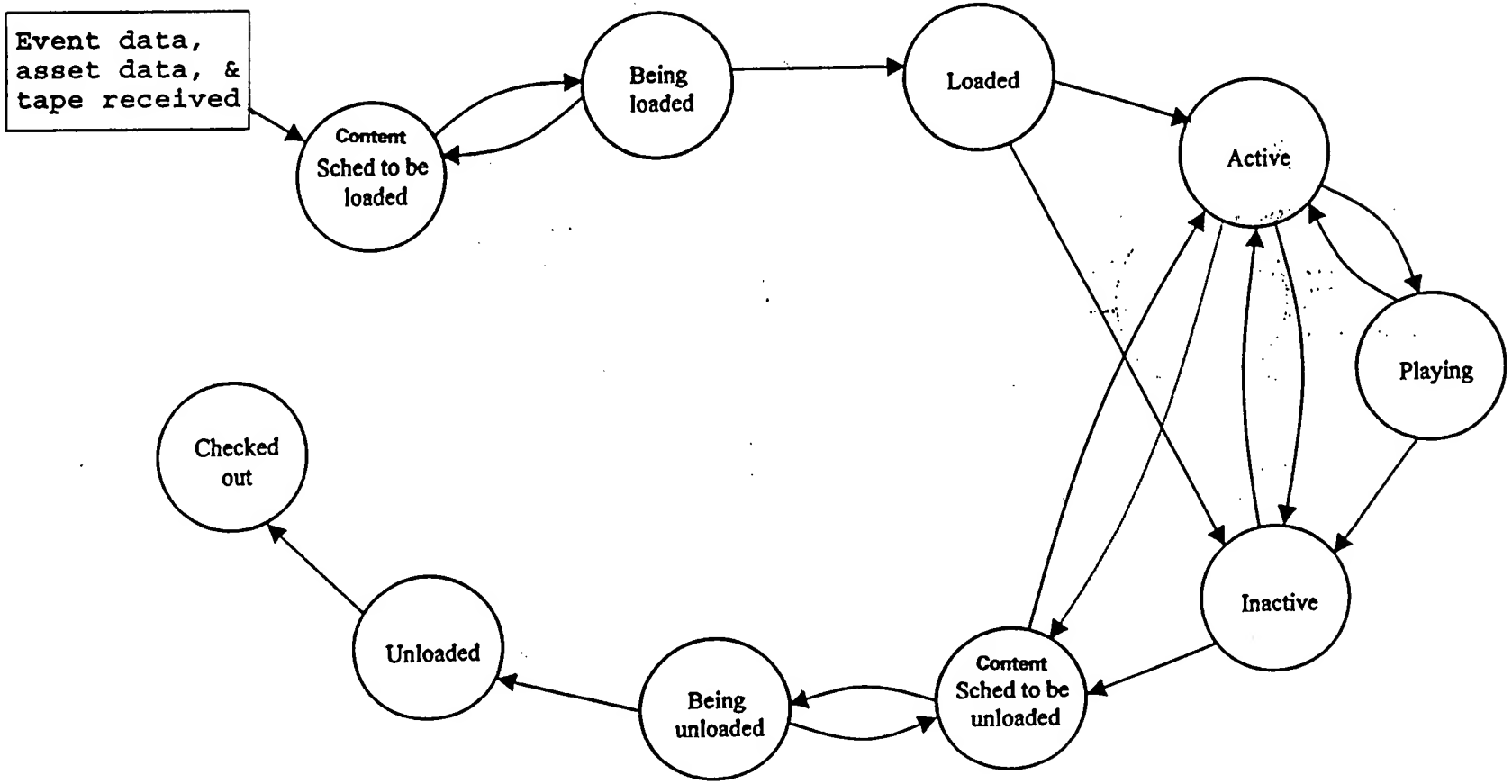

Event data, asset data, & tape received
Content Sched to be loaded
Being loaded
Loaded
Active
Playing
Inactive
Content Sched to be unloaded
Being unloaded
Unloaded
Checked out

FIG. 25

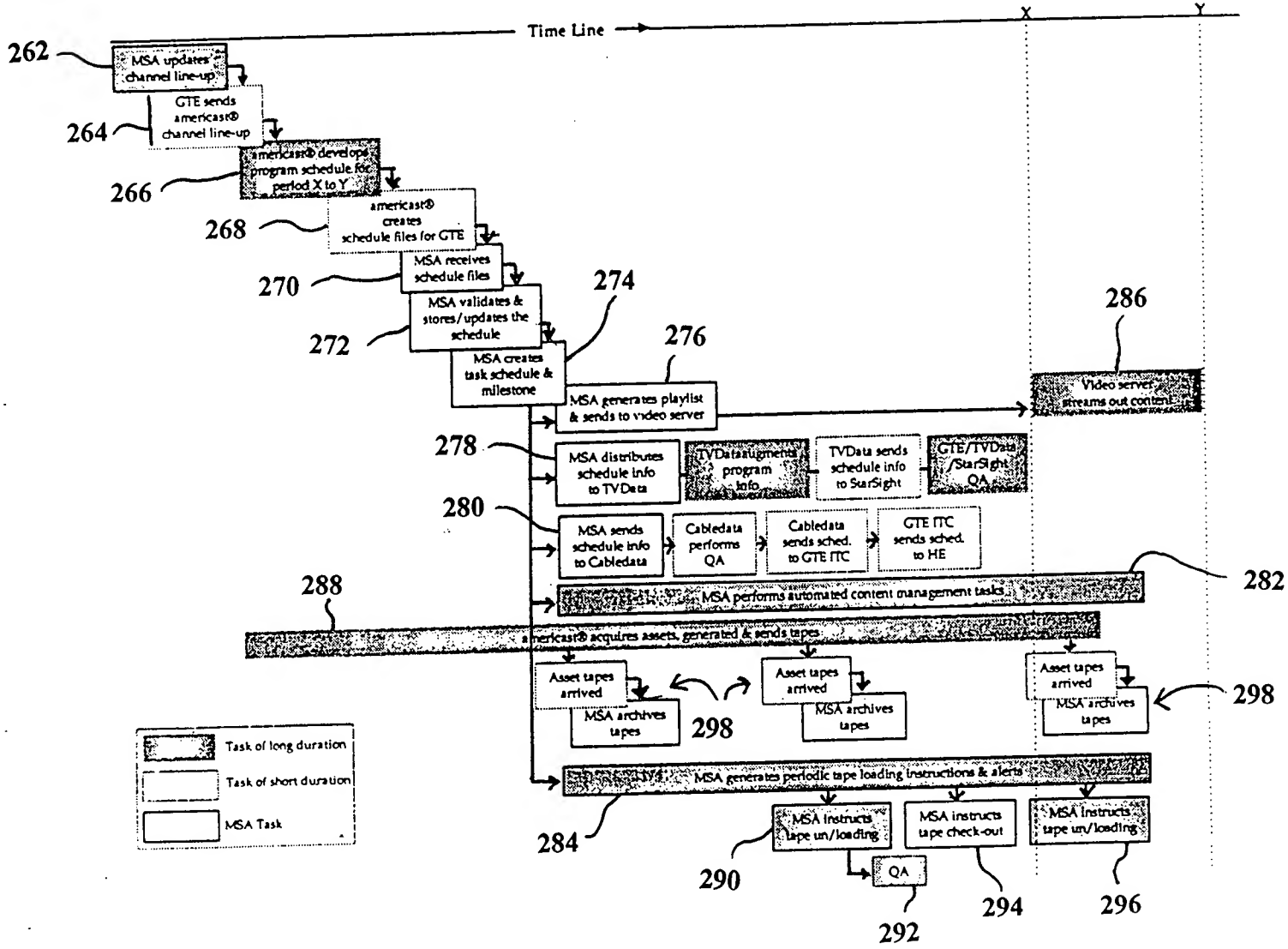
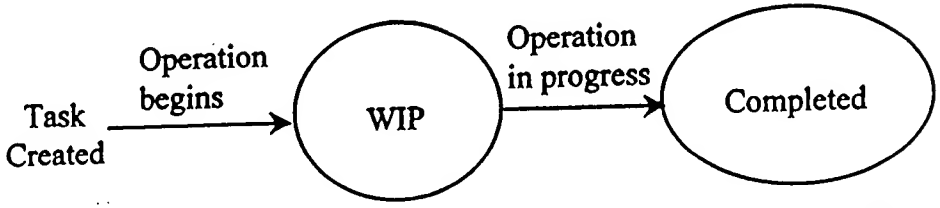

Time Line
X
Y
262
MSA updates channel line-up
264
GTE sends americast® channel line-up
266
americast® develops program schedule for period X to Y
268
americast® creates schedule files for GTE
270
MSA receives schedule files
272
MSA validates & stores/updates the schedule
274
MSA creates task schedule & milestone
276
MSA generates playlist & sends to video server
286
Video server streams out content
278
MSA distributes schedule info to TVData
TVData augments program info
TVData sends schedule info to StarSight
GTE/TVData /StarSight QA
280
MSA sends schedule info to Cabledata
Cabledata performs QA
Cabledata sends sched. to GTE ITC
GTE ITC sends sched. to HE
282
MSA performs automated content management tasks
288
americast® acquires assets, generated & sends tapes
Asset tapes arrived
MSA archives tapes
298
Asset tapes arrived
MSA archives tapes
Asset tapes arrived
MSA archives tapes
298
MSA generates periodic tape loading instructions & alerts
284
MSA instructs tape un/loading
MSA instructs tape check-out
MSA instructs tape un/loading
290
QA
292
294
296
Task of long duration
Task of short duration
MSA Task

FIG. 26

86E027 "E25h0260

FIG. 27



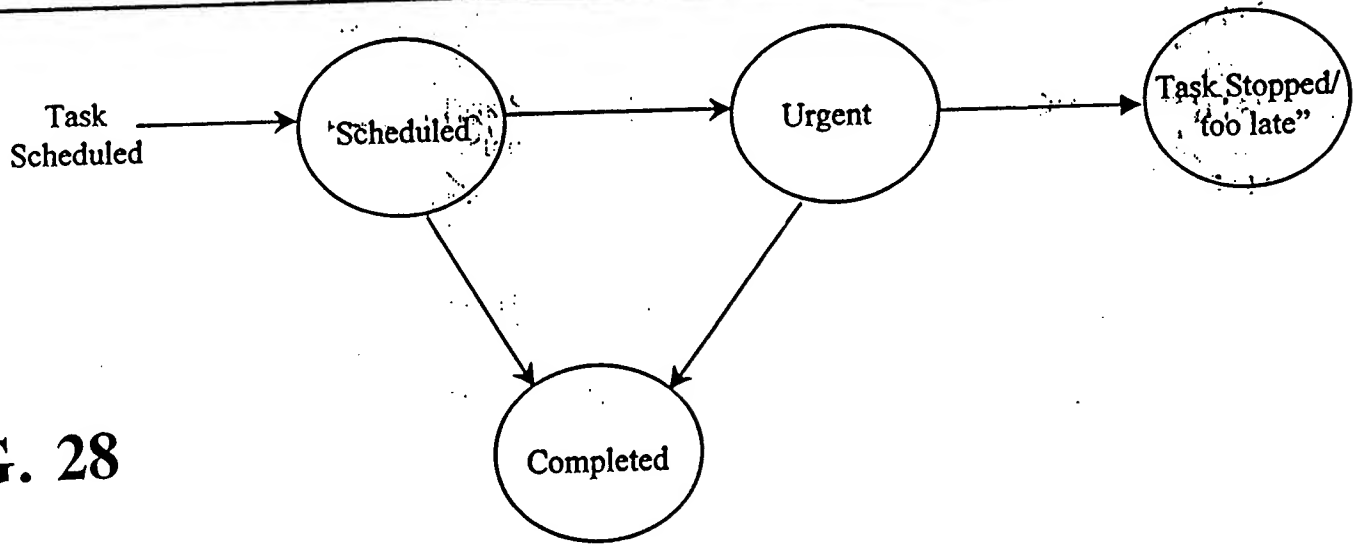




FIG. 28

86E02T "E25H0260

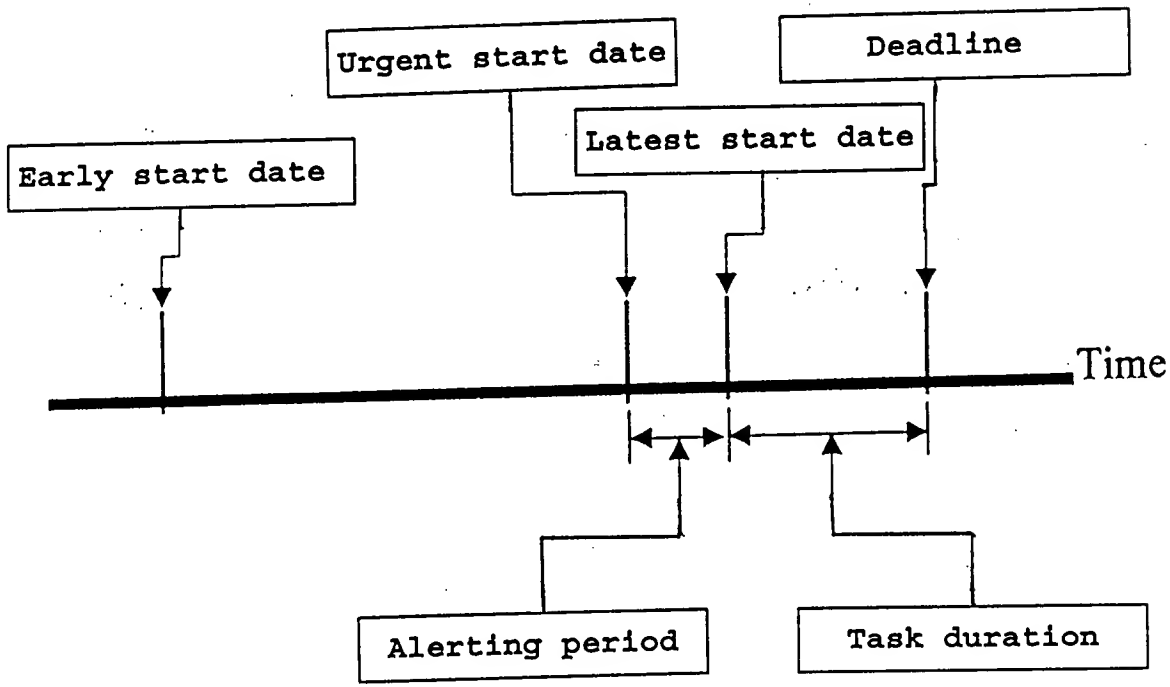



FIG. 29

86E027"E25H0260

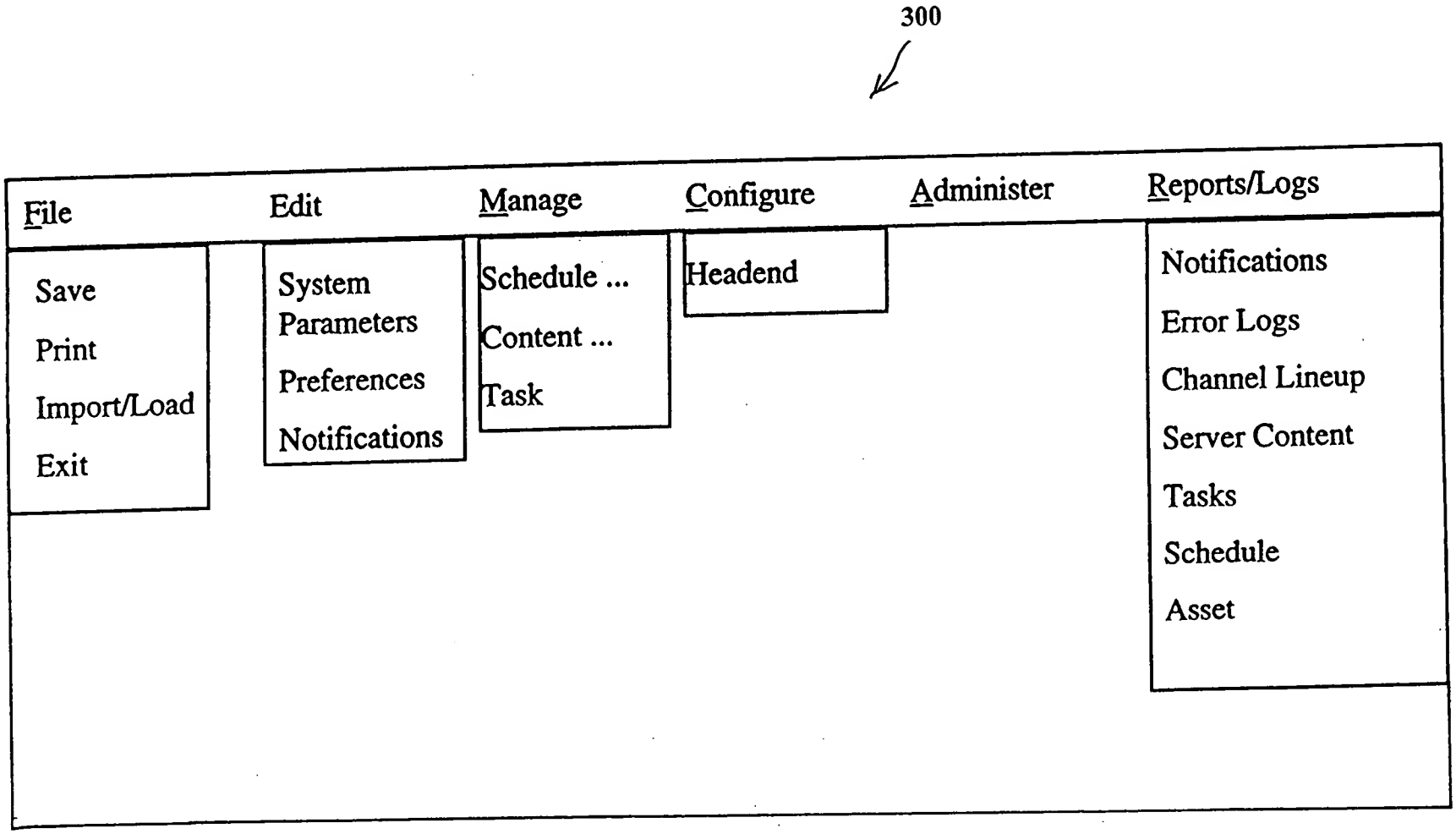



FIG. 30

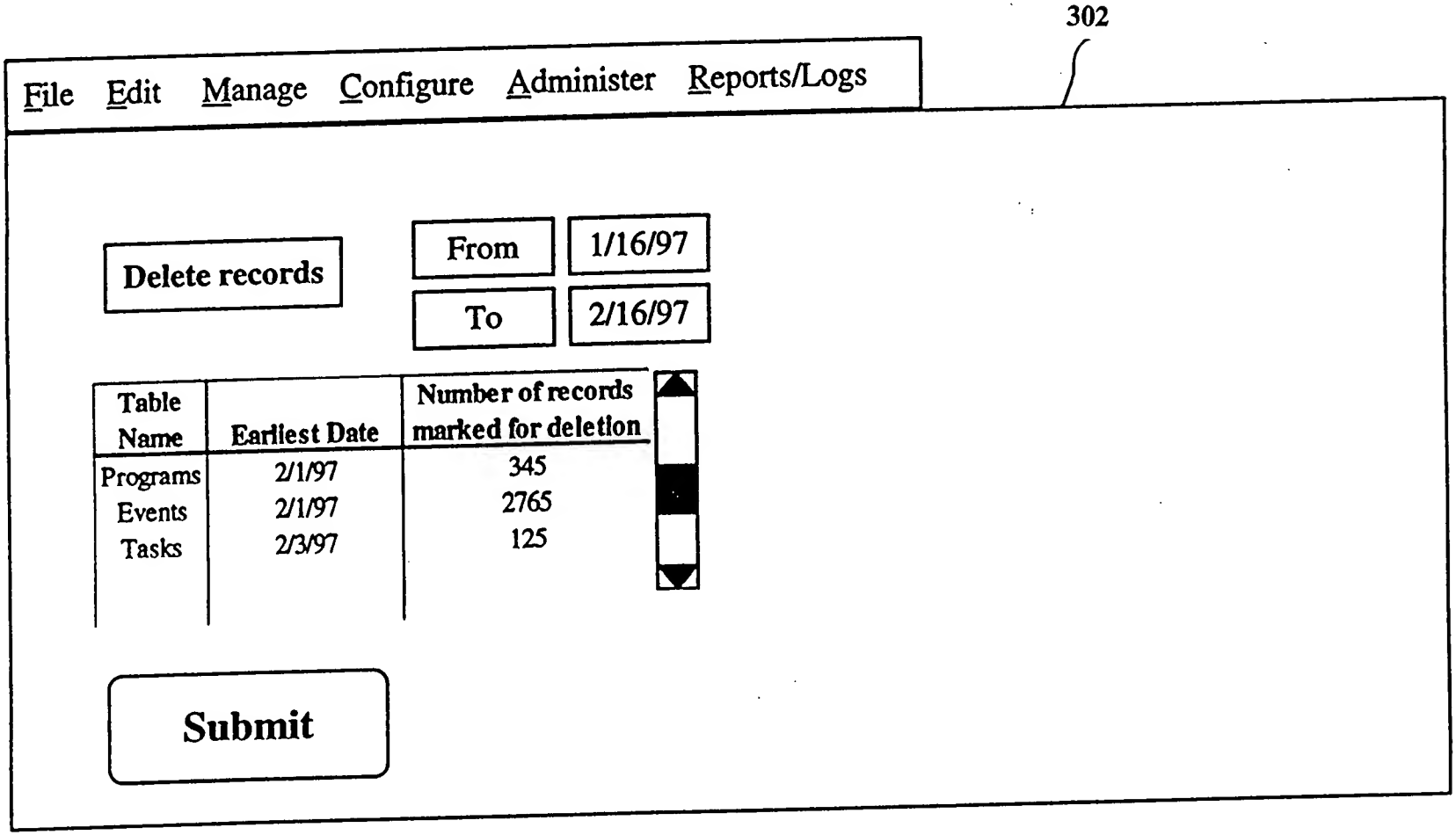

302
File Edit Manage Configure Administer Reports/Logs
Delete records
From
1/16/97
To
2/16/97
Table Name
Earliest Date
Number of records marked for deletion
Programs
2/1/97
345
Events
2/1/97
2765
Tasks
2/3/97
125
Submit

FIG. 31

86E02F "E25h0260

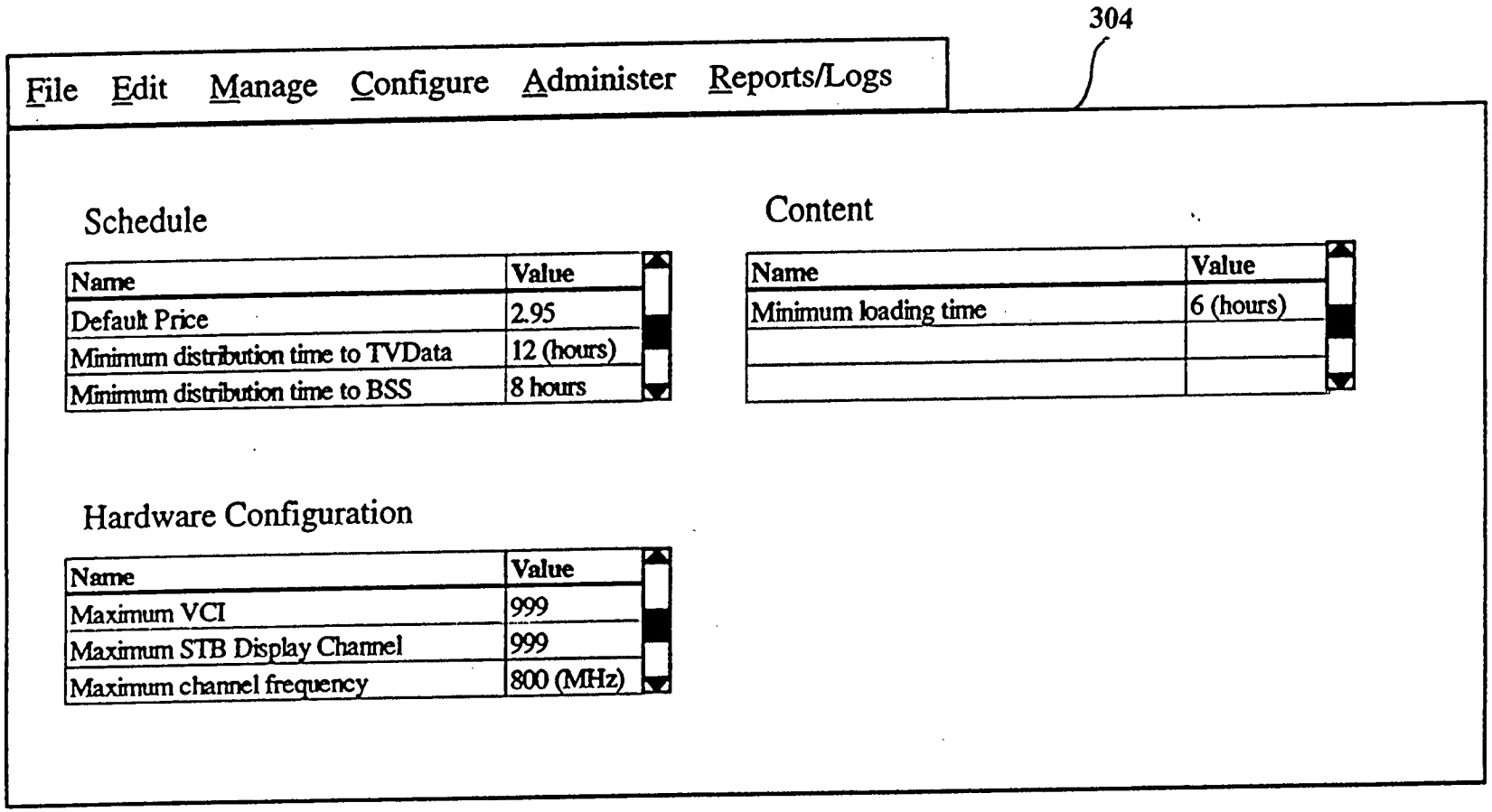



FIG. 32

86E027 "E25h0260

306

File Edit Manage Configure Administer Reports/Logs

| Id | Module | Event | Normal/Alert | Notify GUI (Y/N) | Send to printer (Y/N) |
|---|---|---|---|---|---|
| | | | | | |
| 1 | Schedule Management | Schedule could not be validated | Alert | Yes | Yes |
| 2 | Schedule Distribution | System cannot communicate with TVData | Alert | No | No |
| 3 | Content Management | Asset not loaded on video server by due date | Alert | Yes | No |
| 4 | Schedule Management | Schedule has been changed | Normal | Yes | Yes |
| | | | | | |

FIG. 33

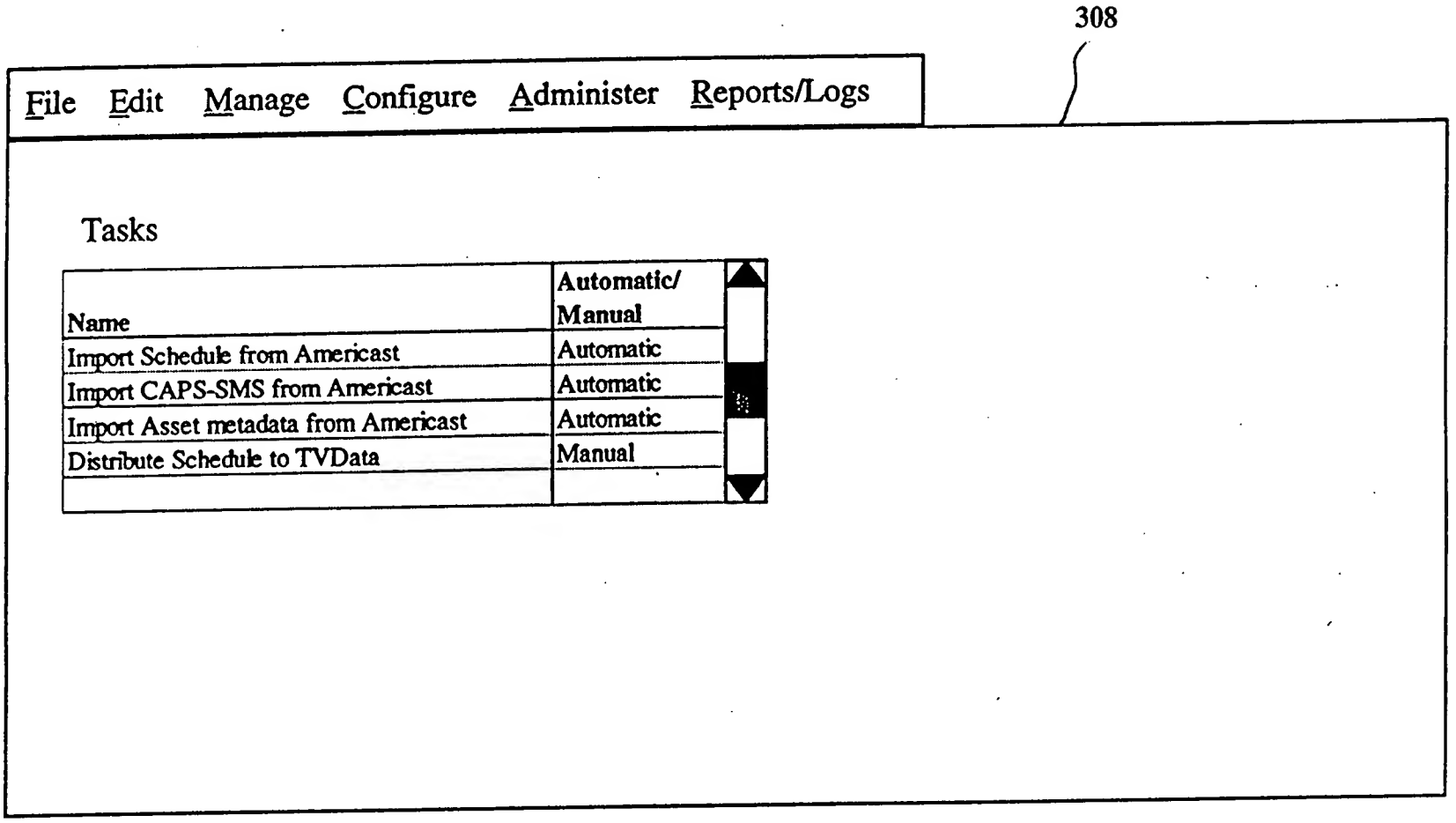

308
File Edit Manage Configure Administer Reports/Logs
Tasks
Name
Automatic/ Manual
Import Schedule from Americast
Automatic
Import CAPS-SMS from Americast
Automatic
Import Asset metadata from Americast
Automatic
Distribute Schedule to TVData
Manual

FIG. 34

86E02T" E25H0260

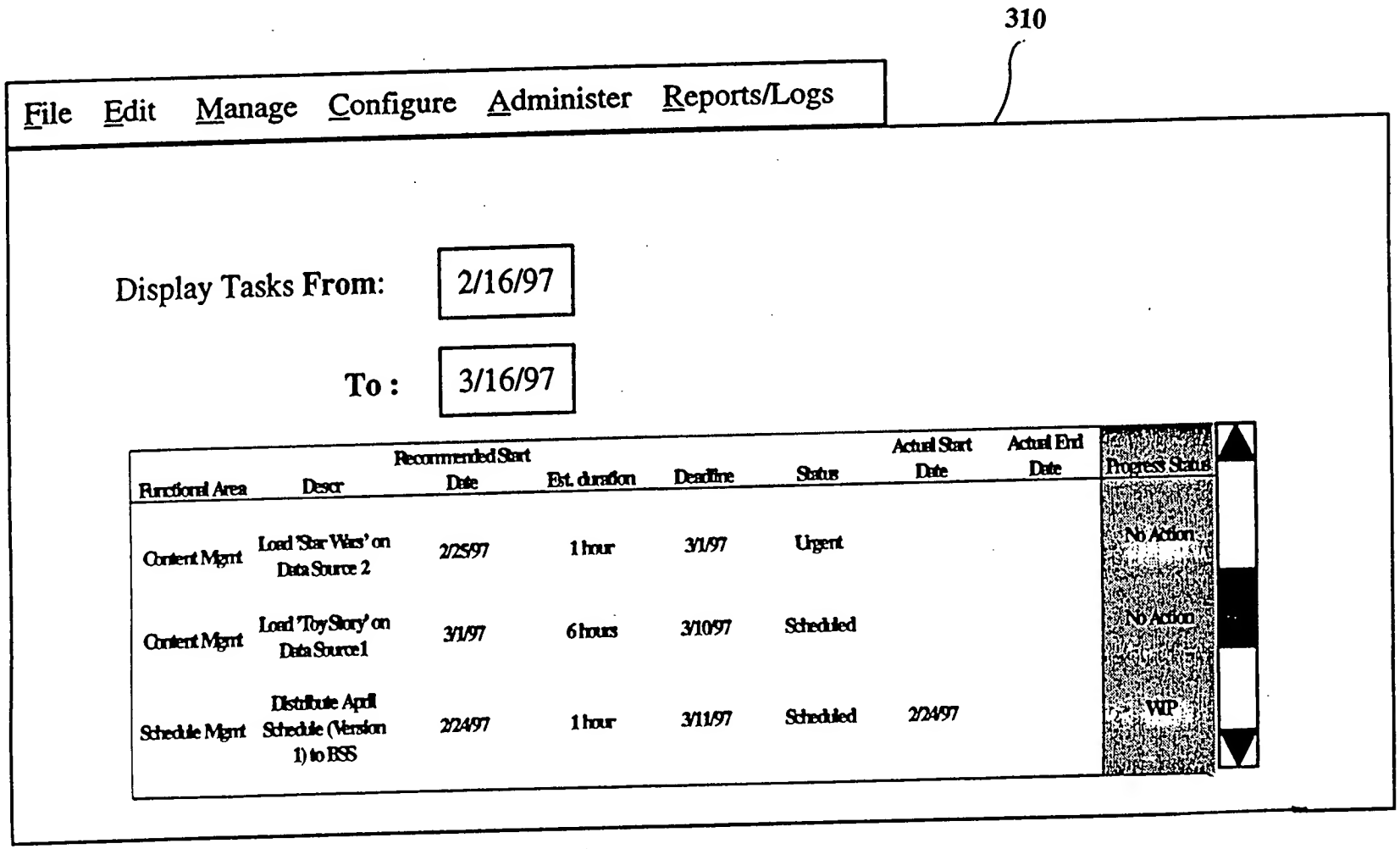



FIG. 35